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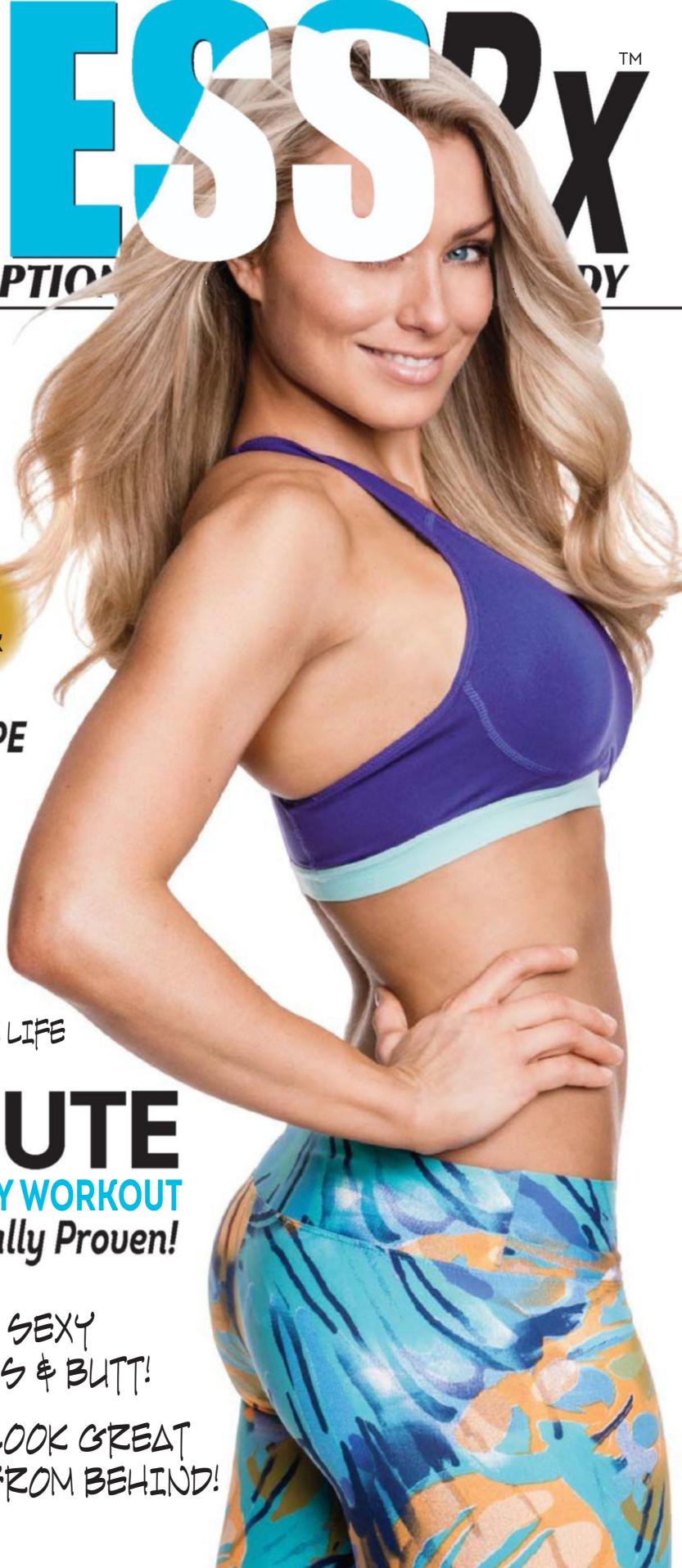
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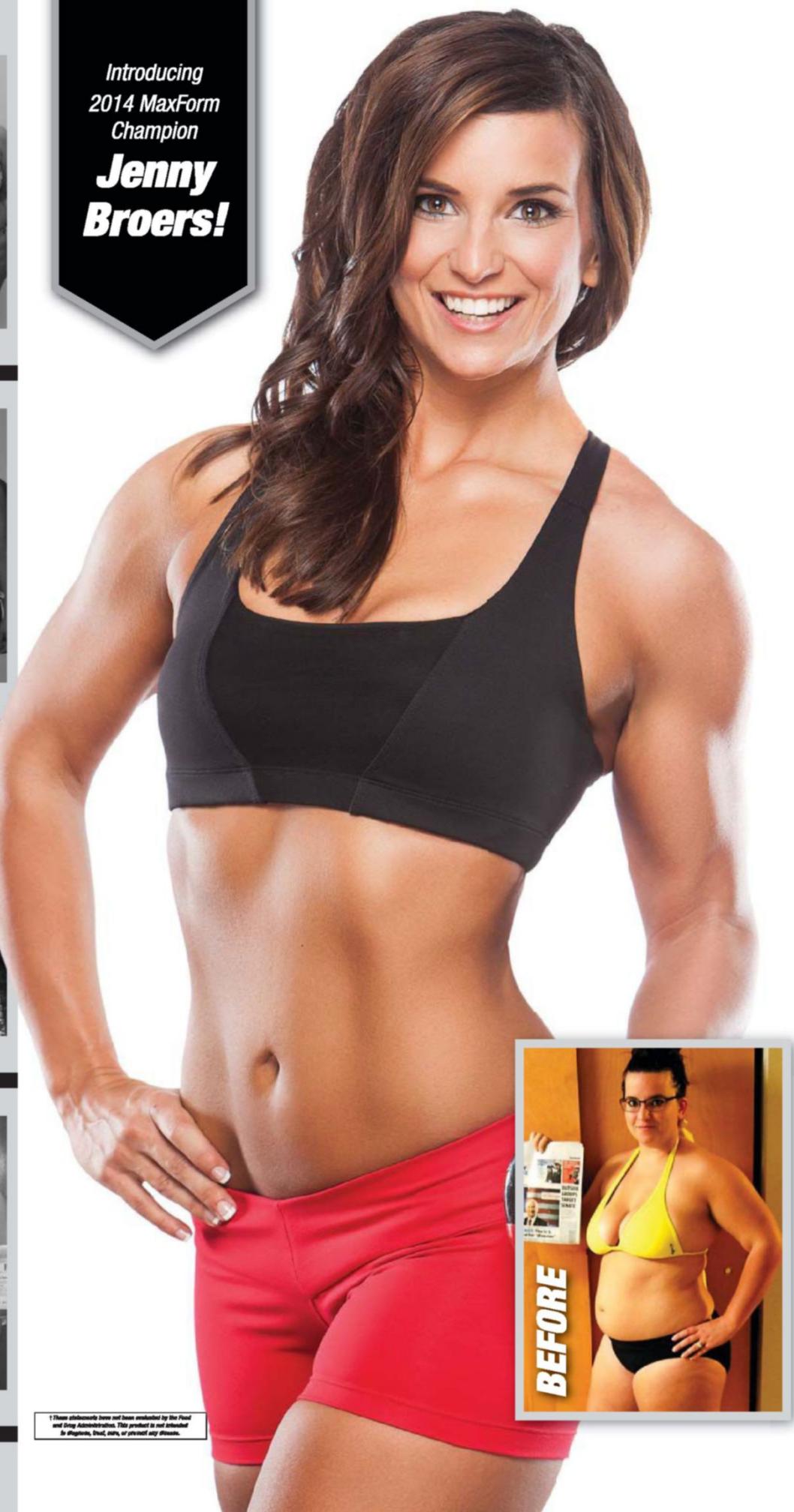


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*Jenny*

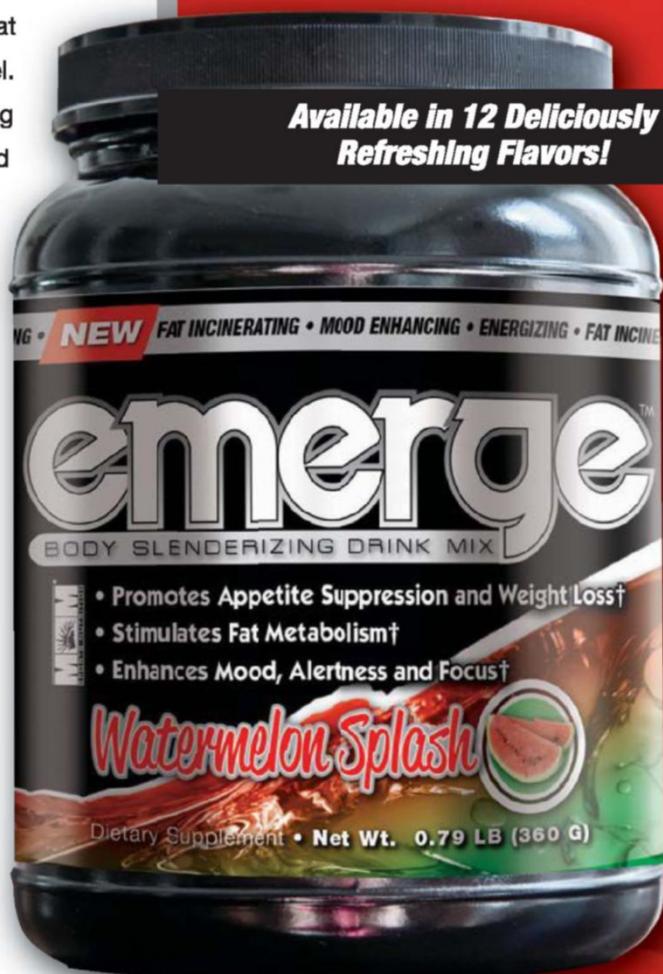
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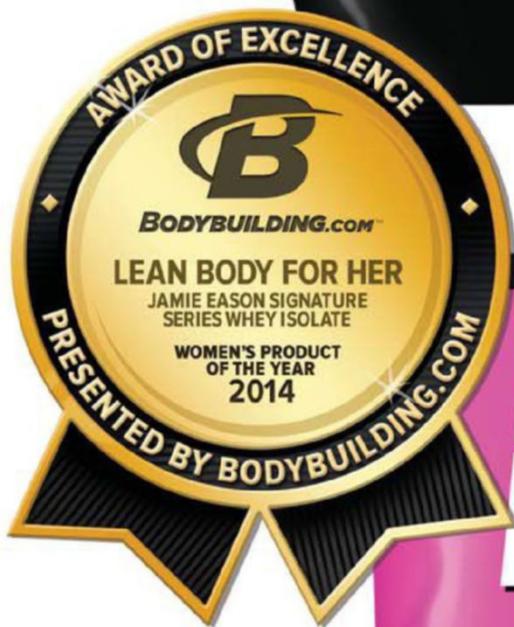
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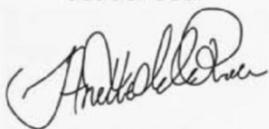
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# Anette de la Rosa

TeamGAT Athlete  
IFBB Bikini Pro  
Jetfuel User



Connect with Anette at  
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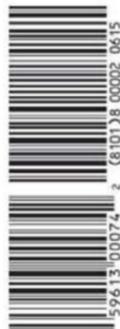
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## Get in Cover Girl Shape for Summer

**Have you ever wondered just how cover models get in shape?** You see, the truth is that most fitness models are not in peak shape all year round. When it comes time to prepare for a contest or a magazine shoot, it takes a certain kind of perseverance, dedication and the right fitness plan in order to be "cover ready." But you don't have to be a fitness model to take part in such a total body transformation— if you've got the right tools, YOU, too, can look like a cover model by the time summer rolls around.

In "Get in Cover Girl Shape! 8-week Total Body Transformation with Dianna Dahlgren" by Lisa Steuer and Jaime Baird on page 48, find out exactly how Dianna got in shape for the cover of this very issue— including her total-body program and a sample diet. During the eight-week program, Dianna dropped 8.5 pounds, resulting in the lean and fit cover-ready physique you see here. In addition, Dianna discusses some of the fitness and health challenges she's faced over the years to get to a healthy place. "I struggled with my fitness a lot, but I was able to overcome and still love lifting, training and eating healthy," said Dianna.

"Vikings" star Katheryn Winnick is tough— both on the screen and off. The Canadian-born star plays Lagertha in the History Channel saga, and she also holds a third-degree black belt in tae kwon do and a second-degree black belt in karate. In addition, she teaches self-defense and performs her own stunts on the show. In fact, she's taught self-defense to her fellow cast members, and she's in the process of opening up her new business— Win Kai Self-Defense. In "Release Your Inner Warrior: Tips and Self-Defense Advice from 'Vikings' Star Katheryn Winnick" by Lisa Steuer on page 58, Katheryn talks about how she stays in shape, her gluten-free diet, easy self-defense tips that everyone should know and much more. "Perseverance will get you far. Even if you don't reach the top, you'll get pretty close if you just keep trying to reach it," said Katheryn.

Every girl wants toned glutes— but don't forget about the hamstrings! After all, a set of sculpted, tight, hamstrings is the perfect complement to your backside. In "Ham It Up With Two-time IFBB Bikini Olympia Champion Ashley Kaltwasser" by Jaime Baird on page 62, Ashley, an 11-time IFBB Bikini Champion and former Division 1 track athlete, shares her favorite hamstring exercises and top training tips. And, even more important than appearance, well-trained hamstrings are critical to injury prevention, especially with athletes. With this program, you'll have strong, sexy legs by summer! "The mind is a powerful thing— sometimes all you need is a mental push to accomplish great things," said Ashley.

Even when training gets tough, you've got to SHOULDER ON! That's because sculpting shoulders takes consistency, dedication and the right exercises to hit the upper body from all angles. In "Shoulder On! Sculpt Your Upper Body for Summer with IFBB Pro Candice Keene" by Lisa Steuer on page 72, Candice demonstrates an upper body-sculpting workout with some less-than-traditional exercises that you might not already be including in your routine. Get ready to rock those short sleeves when the warm weather hits! In addition, a set of beautiful, toned shoulders can make your waist appear smaller, giving your physique a more balanced shape. "We all will have our rough days, and that's OK. It's how you bounce out of it that matters," said Candice.

The rest of the issue is packed with the best tips, workouts and advice from the experts, as well as scientifically backed research on exercise and healthy eating. You've got all the tools you need to get sculpted for summer— now it's time to get to work!

**Elyse & Jennifer**

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## LETTER OF THE MONTH

### THANK YOU: YOU CHANGED MY LIFE!

Dear FitnessRx,

Hello, I wanted to simply express my gratitude for what FitnessRx for Women has meant to me and my transformation.

I'm 27 years old and throughout my childhood to age 18, I was overweight and could never gain control, no matter how many diets I did. I was dealing with depression and a lack of self-esteem, because I couldn't feel comfortable in my own skin. As a late teen I would continually hit barriers, but I was determined this time to figure it out!

I remember picking up my first edition of the magazine and being in awe of the women on the cover. She was probably considered "too buff" for some people, but to me she was the definition of strong and everything that I wanted to be. This was the turnaround in my mind from skinny to strong.

My heaviest recorded weight was 168 pounds. I remember seeing that on the scale and being so horrified that I sat on the bathroom floor and cried. I couldn't live disappointed in myself, anymore.

The driving force behind my new life was being tired of being unhappy with who I had become. I refused to be embarrassed or for people to say, "She has such a pretty face," because they couldn't say I was beautiful with the body I possessed. I then turned from dieting to fueling and from movement for calorie burn. I sculpted a body I love.

So, I started 10 years ago with a lot of sweat, soreness and frustration. But I created a new life and body with your guidance all along the way. I followed meal plans, workouts and used the cover models for my vision board and inspiration.

Today, I weigh 125 pounds. I am a health coach and personal trainer. I owe a lot of that to your continual inspiration.

So, thank you for helping me gain control and become the woman I was meant to be!

Strength and Blessings,  
Susannah VanWinkle  
Email

**Send us your comments!**  
editor@fitnessrxmag.com or  
Advanced Research Media  
21 Bennetts Road, Suite 101  
Setauket, NY 11733

### FINDING INSPIRATION

Dear FitnessRx,

I'm writing in to say that I absolutely adore your magazine! It's helped me in more ways than I can count. The women that you feature have been so inspiring to me! This is silly to say, but my dream is to be in your magazine so I can inspire others. I've had this dream for a long time and hope one day it will come true. I'd love to share my story... I had an eating disorder in 2011 and it has been a huge journey. It has been far from easy, but bodybuilding and the inspirations I saw in your magazine made my mind change from the idea that stick skinny was pretty, to muscle is beautiful! I used to eat under 300 calories per day; I've come so far in three years. I thank you so much for helping me change!

Nikki Ettig  
Email

### MY TRANSFORMATION

Dear FitnessRx,

I am a 21-year-old student with a passion for fitness and traveling and I'd like to tell you my story! I have always lived an active and generally healthy lifestyle, but after spending four months traveling through Europe, the endless nights of drinking wine and eating too much pizza and pastries caught up to me. While traveling, I wasn't focused on my health and was lucky to get a workout in once or twice a week. Both my bad eating habits and lack of exercise led me to gain weight rather quickly, leaving me in a body I wasn't happy about.

After returning from Europe, I realized I no longer fit into the pants I left behind, my weight climbed to 165 pounds and something had to change. FitnessRx for Women was my go-to choice while sweating away on the StairMaster! And following a proper nutrition plan and weights inspired me to push my fitness goals further and step onstage. After 16 weeks the results are amazing—I lost 31 pounds and I accomplished my goal! I'm so happy with the progress and can't wait to continue on my fitness journey. I also feel great! Not drinking alcohol, and eating food that is good for my body has left me with a very positive mindset!

Lindsay Galliher  
Email



### LOVE FOR JAMIE EASON

Dear FitnessRx,

Thank you so much for putting Jamie Eason on the February 2015 cover. Not only is she a huge inspiration as a fitness icon, but as a mother as well. She really does seem to be able to do it all! I also loved the 14-Day New Year Jump-start workout and diet plan, and I'm already seeing great results with the program. I especially appreciated how each exercise was pictured so I could easily complete everything with the proper form. Jamie truly represents everything that I strive for as a mom in the fitness world, and I can't wait to see more of her in the future.

Lacey Depond  
Email

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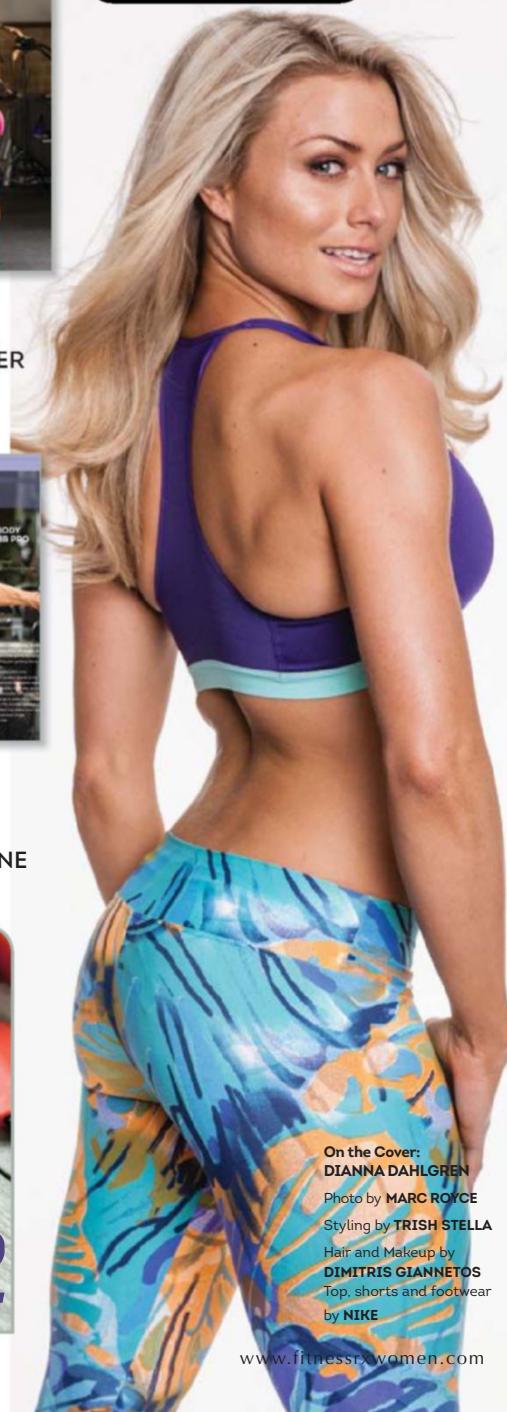
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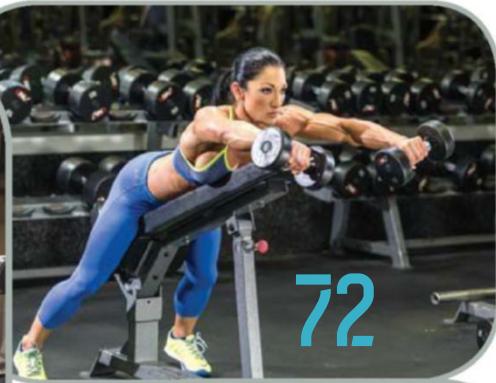
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WITH REGULAR SECTIONS FROM  
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### THE FIT LIFE

With Nicole Wilkins

### YOUR BEST

By Jaime Baird

### KNOW IFs ANDs or BUTTS

Featuring Amanda Latona

### KEEP IT FRESH

With Ashley Kaltwasser

### PERFECT FORM

With Jessie Hilgenberg

### REAL STRENGTH

With Ava Cowan

### THE LATEST IN NUTRITION, SUPPLEMENTS AND HEALTH

Lauren Jacobsen

### ALLI'S SLIM PICKINS RECIPES

Allison Frahn

### G-FIT SERIES

Gina Aliotti

### HOT STUFF

Dianna Dahlgren

AND MUCH MORE!



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# FitRx Warm UP

THE LATEST NEWS AND RESEARCH FROM THE WORLD OF FITNESS



APRIL 2015

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BY STEVE BLECHMAN AND THOMAS FAHEY, EdD

## EXERCISE PROMOTES PROTEIN SYNTHESIS DURING STARVATION

■ Active people often use brief periods of starvation to lose body fat rapidly. Unfortunately, starvation turns off biochemical pathways that promote lean muscle growth, most notably the mTOR pathway. During starvation, cells, particularly muscle

cells, atrophy and use their cell content for energy. A Japanese study on starved mice from the Juntendo University School of Medicine in Tokyo found that exercise activated the mTOR pathway for protein synthesis and slowed down the starvation-

related pathways linked to atrophy. People using short-term starvation for weight loss should include exercise so that they minimize the loss of lean muscle. (*Biochemical and Biophysical Research Communications*, 456: 519-526, 2015)



■ The hamstrings are multi-joint muscles that flex the knee and extend the hip. Hamstring injuries typically occur during hip extension in activities such as sprinting, jumping and cutting. Many people do leg curls rather than hip extension exercises to build the hamstrings after injuring them. An interesting study led by Brad Schoenfeld from CUNY Lehman College in New York found differences in regional hamstring activation— as measured by electromyography— during leg curls and straight leg deadlifts. **Straight-leg deadlifts showed greater activation of the upper part of the muscles, while leg curls showed greater activation of the lower parts.** This study has important implications for hamstring development and for injury rehabilitation following hamstring injury. (*Journal Strength Conditioning Research*, 29: 159-164, 2015)

## FIVE SETS SUPERIOR to Three or One-Set Weight-training Programs

■ In beginning weight trainers, most studies show that one set is as effective as multiple sets for increasing strength and power. However, this is highly controversial. Critics say that most of these studies were poorly controlled and didn't pay close enough attention to the intensity of the training programs. A Brazilian study using untrained young men found that five sets per weight-training exercise was superior to three or one set in several measures of strength during a six-month training program. However, at the beginning of the study, the five-set group was markedly stronger than the other groups, even though the test subjects were randomly assigned to training groups.

Training studies are notoriously difficult for researchers. In assessing the practical significance of training studies, we must consider factors such as the training levels of the test subjects, unintended bias in the research design and the supervision of the training sessions. (*Journal Strength Conditioning Research*, Published Online January 2015)

## CALORIC EXPENDITURE GREATER DURING HIIT RESISTANCE TRAINING

■ High-intensity interval training can build fitness remarkably quickly. Studies of HIIT on stationary bikes found fitness gains in two weeks that normally took six months. Paul Falcone from MusclePharm Sports Science Institute in Denver and colleagues found that **caloric expenditure was greater during HIIT performed on a hydraulic weight machine compared to workouts of equal duration involving either endurance training or strength training.** The HIIT program involved repeated intervals on a hydraulic weight machine for 20 minutes at maximum effort followed by 40 seconds of rest. All of the training sessions were 30 minutes in length. HIIT resistance training programs can build strength and endurance at the same time. (*Journal Strength and Conditioning Research*, published online January 2015) »

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## SPRINT CYCLING INCREASES GROWTH HORMONE AND IGF-1

■ Growth hormone and IGF-1 are two important anabolic hormones that increase lean muscle and strength. Growth hormone promotes muscle hypertrophy indirectly by increasing the production of IGF-1. Israeli researchers from the Sackler School of Medicine in Tel Aviv found that growth hormone, IGF-1 and lactate increased during a single 30-second maximal sprint on a stationary bike (i.e., Wingate test). Growth hormone increased more and peaked earlier in women than men, but IGF-1 only increased significantly in men. This was an interesting study, but it has little practical application. (Journal Strength Conditioning Research, 28: 3411-3415, 2014)



## HIGH-REP VELOCITY IMPROVES ATHLETIC PERFORMANCE BEST

■ Training at "maximum intended" training velocity improves strength, power and athletic performance better than performing reps slowly and under control—according to a study by Spanish researchers. Experienced weight trainers performed a squat training program at either maximum intended velocity or half velocity. Both groups trained at 60 percent of one rep maximum. The explosive training group showed much greater gains in squat strength and vertical jump than the slow training group. People trying to improve power for sports should train explosively. (International Journal Of Sports Medicine, 35: 916-924, 2014)

## BOSU BALLS HAVE VARIABLE EFFECTS on Core Muscle Activation

■ Bosu balls are extremely popular in core development classes. They provide instability during exercise, which may increase core muscle activation to stabilize the spine. A study from University College in Sogndal, Norway found that **performing repetitions of sit-ups with the Bosu ball placed in the small of the back increased activation of the rectus abdominis by nearly 25 percent compared to standard sit-ups.** Placing the Bosu ball under the feet during sit-ups did not increase abdominal muscle activation compared to normal sit-ups. Bosu balls placed under the low back can increase core muscle activation during high-rep sit-ups. (Journal of Strength and Conditioning Research, 28: 3515-3522, 2014)



## Compression Clothing SPEEDS Recovery

■ Intense training causes small muscle injuries and inflammation that trigger fitness adaptation but also prolong recovery. Following muscle injury, athletic trainers and physical therapists recommend the RICE principle. RICE is an acronym standing for rest, ice, compression and elevation. Japanese researchers showed that wearing compression garments following weight training (three to five sets of 10 reps at 70 percent of max for nine exercises) accelerated recovery as measured by a bench press and the extension strength test. Compression clothing promotes recovery from weight training. The effects occur faster in upper body than lower body muscles. (Medicine & Science in Sports and Exercise, 46:2265-2270, 2014) ■

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## JET LAG PROMOTES OBESITY

■ Flying stinks! Combine cramped seating, long lines at the security gates, flight delays, high prices, limited baggage allowance and cabins packed with disease-ridden passengers and you have the perfect storm for a miserable day. Christoph Thaiss and co-workers from the Weizmann Institute of Science in Israel, in a study on mice, found that jet lag promotes obesity by altering the microbes in the gut. **Crossing time zones throws off the normal feeding patterns of the microbes that bias the metabolism toward fat storage.** This study might explain why shift workers and frequent

fliers have an increased risk of the metabolic syndrome— a group of symptoms that include high blood pressure, high blood fats, abdominal obesity, poor blood sugar regulation and inflammation. (*Cell* 159: 514-529, 2014)



## Ketogenic Diets SUPPRESS APPETITE

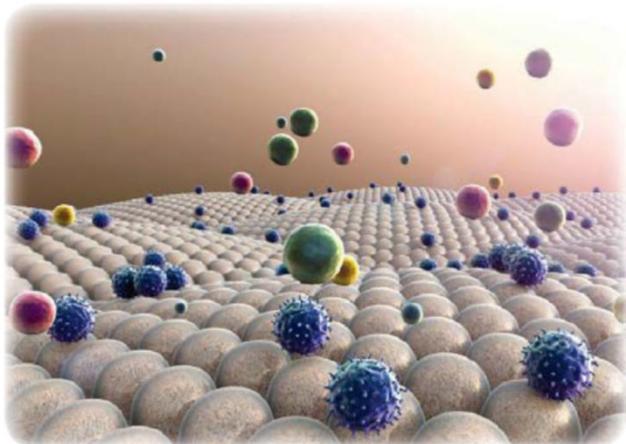
■ The brain uses mainly glucose (sugar) for fuel but it can also use ketones and lactate. During low-calorie dieting, the body produces ketones to supply fuels to the brain. The liver produces ketones that come from fatty acids released during fat breakdown that occurs due to low calorie intake. A literature review by researchers from the University of Sydney in Australia concluded that ketones produced during very low-calorie diets suppress appetite slightly. Ketogenic diets (i.e., low-calorie diets that result in ketone production) decrease appetite and increase the feeling of fullness even during severe caloric restriction. Normally, appetite increases during low-calorie dieting. (*Obesity Reviews*, published online November 17, 2014)

## GUT MICROBES LINKED TO OBESITY

■ The human gastrointestinal tract contains more than 100 trillion microbes. Imbalances in gut microbes have been linked to obesity, the metabolic syndrome, inflammation, immune system breakdown, bad breath, gum disease, coronary artery disease, cancer, back pain, allergies and autism— according to a literature review by Davide Festi and colleagues from the University of Bologna in Italy. Obese and lean humans have different gut microbe populations, which might account for individual differences in weight gain and low-grade inflammation. Bacteria-laden foods called probiotics, containing bacteria such as *Lactobacilli acidophilus* and *Bifidobacteria* may be the next big health food craze because they stabilize the microbe population in the gut. Exercise also alters the gut microbes, which promotes weight loss. (*World Journal Of Gastroenterology*, 20: 16078-16094, 2014)

## HIGH PROTEIN INTAKE MAINTAINS METABOLIC RATE DURING LOW-CALORIE DIETS

■ Losing weight and maintaining lost weight is difficult because metabolic rate (i.e., calorie burning) gradually slows, which makes it difficult to sustain a negative caloric balance. Researchers from Maastricht University in the Netherlands found that consuming a high-protein, low-calorie diet maintained metabolic rate better than a high-carbohydrate, low-protein and low-calorie diet. During the early phases of the weight-loss program, the high-protein diet prevented hunger but this disappeared during the later phases of the 12-week experiment. Consuming high amounts of protein during dieting and weight maintenance will help maintain metabolic rate and increase the chances for successful weight loss. (*Clinical Nutrition*, published online November 8, 2014)



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## DIOGENE DIET HELPS MAINTAIN WEIGHT

■ Increasing the protein content of the diet by 5 percent after significant weight loss (25 pounds) resulted in better weight maintenance than consuming diets containing various types of carbohydrate. The study was conducted in DiOGene multicenter in Europe. The test subjects followed an 800-calorie-per-day diet for eight weeks and lost an average of 25 pounds. Increasing protein intake helps people maintain weight loss and improved blood pressure, blood fats and inflammation in adults and children. The post-weight-loss diet was particularly significant because no attempt was made to reduce caloric intake. Increasing protein intake is an easy, effective way to help control bodyweight. (*International Journal of Obesity*, published online December 26, 2014)

## BEST WAY TO LOSE WEIGHT: DIET, EXERCISE OR DIET + EXERCISE?

■ Want to lose 20 pounds? Should you go on a starvation diet, run 20 miles a week or reduce calorie intake and exercise moderately? Richard Washburn and co-workers from the University of Kansas Medical Center in Kansas City performed a detailed literature review of studies published between 1990 and 2013. Caloric restriction caused the greatest weight loss. Dieting was more effective than aerobics plus a normal diet or diet plus exercise. However, most studies included only about 30 minutes of exercise. In 2005, the U.S. Department of Agriculture guidelines recommended one to one-and-a-half hours of aerobic exercise per day for people wanting to lose weight or maintain lost weight. This was based on doubly labeled water studies that precisely measured the minimum amount of exercise necessary to lose weight. Few people are willing to do that much exercise. In the long run, people lost the most weight and maintained lost weight best when they combined diet and exercise. (*PLOS ONE* 9(10): e109849, 2014)

## SINGLE BOUTS OF EXERCISE Do Not Increase Appetite

■ Some weight-control experts caution dieters that physical activity has limited effects on weight control because it increases appetite and food intake. Catia Martins from Norway and colleagues found that neither intense nor continuous exercise influence appetite, food intake or hormones controlling appetite. They studied overweight and obese people who performed single bouts of moderate to vigorous intensity exercise performed three hours before lunch. **All forms of exercise reduced insulin but none had any effect on lunchtime feeding behaviors.** In the short run, vigorous or moderate-intensity exercise does not increase appetite. (*Medicine Science Sports Exercise*, 47: 40-48, 2015)

## Gross Obesity INCREASES the Risk of PREMATURE DEATH

■ Gross obesity is defined as a body mass index (BMI) greater than 39 (kilograms of weight per square meter of height). BMI is a measure of the proportion of weight to height and is a simple way of predicting obesity. A study from the National Cancer Institute found that gross obesity increased the risk of premature death from heart disease, cancer, diabetes, chronic liver disease and respiratory disease. Surprisingly, gross obesity did not increase the mortality risk for accidents, stroke or prostate cancer. The study was a pooled analysis of 20 studies conducted in the United States, Sweden and Australia. Included in the study were nearly 10,000 people with gross obesity and more than 300,000 normal-weight participants. Researchers examined data collected between 1976 and 2009. (*PLOS Medicine*, 11(7): e1001673, 2014) ■



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BY STEVE BLECHMAN AND THOMAS FAHEY, EdD

## BULLETPROOF COFFEE: The Latest Diet Fad

■ Bulletproof coffee is a beverage containing coffee, unsalted grass-fed butter (high in omega-3 fatty acids) and medium-chain triglycerides (MCTs). MCTs are fats that provide a lot of energy in a small volume, just like fat, yet are absorbed and metabolized rapidly, just like carbohydrates. MCTs may reduce body fat, improve the metabolism of carbohydrates and proteins, enhance the absorption of essential elements such as calcium and potassium, and decrease the risk of heart disease by reducing blood cholesterol and triglycerides. Bulletproof boosters claim the drink curbs hunger, improves mental focus and speeds weight loss. These claims are doubtful. The brain uses mainly carbohydrates as fuels, so the high fat content of the drink would not help brain energetics. Animal studies show that high-fat diets decrease mental function and promote memory loss. People use Bulletproof coffee as a meal replacement. A cup contains more than 300 calories, which would promote weight gain if people also ate normally. Also, MCTs trigger only minimal weight loss. Fads come and go, so it will be interesting to see if Bulletproof coffee is around one or two years from now. (Lipids in Health and Disease 13: 194, 2014; New York Times December 14, 2014)

## Omega-3 Fatty Acids in Fish Oil PREVENT CELL AGING

■ Fish oil is high in omega-3 fatty acids. Consuming oily fish or fish oil supplements increases blood levels of omega-3 and shifts the fat balance toward omega-3s and away from omega-6 fatty acids. A study from Tufts University found that omega-3s prevented telomere shortening in the cells, which promotes cell longevity. Telomeres form the ends of the DNA strands and hold the strands together. The sizes of the telomeres are reduced during cell division, which shortens them over time. Eventually, this reduces the effectiveness of the immune system, which triggers illness and death. Janice Kiecolt-Glaser from Ohio State University and co-workers, in a study on overweight middle-aged and older adults, found that **supplementing omega-3 fatty acids improved the balance between omega-3s and omega-6 fatty acids but did not affect telomere length.** Past studies showed that more prolonged exposure to omega-3 preserved telomere length, so their finding suggest that omega-3 fatty acid supplements could improve cell health and longevity. (Brain Behavior Immunity, 28: 16-24, 2013)

## Reduced Carb Diet Decreases Fat and Improves Blood Sugar Control

■ Reducing carbohydrate intake from 55 percent of calories to 43 percent triggered decreases in bodyweight, abdominal fat deposition and insulin resistance in middle-aged, overweight adults— according to a study by Barbara Coker and Amy Goss from the University of Alabama at Birmingham. Fat loss from the lower-carbohydrate diets

was greater in African-Americans than in European-Americans. Protein intake was equal for both diets. **The lower carb group also showed lower levels of resting blood sugar.** Reducing carbohydrate intake only slightly has a positive effect on body composition and blood sugar regulation. (Journal Nutrition, 145: 1707s-183s, 2015)

## WHOLE GRAINS LINKED TO FEWER HEART DISEASE DEATHS

■ Eating more whole grains is associated with increased longevity and a lower death rate from cardiovascular disease, according to a study of more than 110,000 people led by Hongyu Wu from the Harvard University School of Public Health. Death rates from cancers were not altered by whole grain consumption. **Consuming whole grains may reduce the risk of premature death by 15 percent.** The study confirms the recommendations of the National Dietary Guidelines that people consume more whole grains in their diet. The study examined data from the Nurses Health Study and the Health Professionals Follow-Up Study. They factored out the effects of age, body composition, physical activity and overall diet. The study examined data and death rates that occurred over a 25-year period. (JAMA Internal Medicine, published online January 6, 2015)





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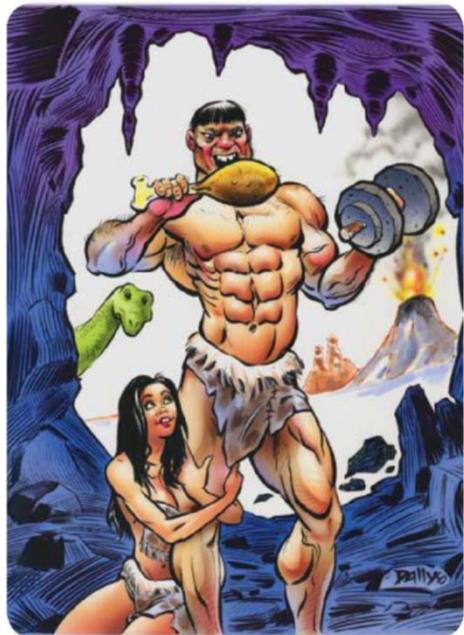
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## HOW MUCH VITAMIN D IS ENOUGH?

■ Vitamin D is critical for normal calcium metabolism and plays a vital role in maintaining bone and muscle health. The vitamin is produced naturally in the skin as part of a reaction involving sunlight but is also consumed in the diet. Many people are vitamin D deficient because they shun vitamin D-fortified food products and don't get much outdoor activity. Adequate vitamin D levels are important for muscle strength, power, speed and preventing falls. **Ensuring adequate vitamin D intake is critical for maximizing muscle and bone health throughout life.** The contribution of vitamin D beyond bone health is controversial. The Institute of Medicine recommends that people aged 1 to 70 consume 600 international units (IUs) of vitamin D a day and that people over 70 consume 800 IUs. The guidelines of the Endocrine Society suggest that even higher doses might be beneficial. However, high doses of vitamin D can cause side effects such as high blood calcium levels and kidney stones. (Endocrine News, November 2014, pages 17-19)

## ANTHROPOLOGISTS QUESTION THE VALIDITY OF THE PALEOLITHIC DIET



■ The Paleolithic diet (Paleo) emphasizes foods that were available during the caveman times, before the advent of agriculture and farming. The reasoning is that human genes evolved over millions of years to reflect the hunter-gatherer lifestyle. The Paleo diet tries to avoid foods such as dairy products, grains, legumes, processed oils and refined sugar that were unavailable to cavemen. Anthropologists Ken Sayers and Owen Lovejoy concluded that the elements of the Paleo diet are almost impossible to determine. Cave people ate whatever was available and no specific food group was universally important. The average lifespan of Paleolithic people was 25 years, but some lived to be older. **Nutrition was based on survival and reproduction, so genetic adaptations were not necessarily aimed at extreme longevity.** Also, modern fruits and vegetables have been selected over time to promote desirable properties that are much different from those available during Paleolithic times. Many diseases linked to poor nutrition occur because we are living so much longer. It's difficult to say whether consuming a simulated Paleolithic diet—whatever that is—is any healthier. (The Quarterly Review of Biology, published online December, 2014)

## DHA REDUCES MUSCLE INFLAMMATION AFTER HEAVY TRAINING

■ Docosahexaenoic acid (DHA) is an omega-3 fatty acid that is a structural part of the brain, skin, sperm, testicles and eyes. Fish oil is the most significant dietary source of DHA. Many studies suggest that DHA reduces inflammation and the risk of heart disease. Frank DiLorenzo, Chris Drager and Janet Rankin from Virginia Polytechnic Institute and State University found that DHA supplements (two grams per day) reduced blood markers of inflammation (creatine kinase and interleukin 6) during four days of eccentric training (negatives). However, DHA had no effects on muscle soreness or range of motion during the four-day period or an additional 13 days of weight training in untrained people. (Journal Strength Conditioning Research, 28: 2768-2774, 2014)

## COCONUT OIL: Separating the Street Noise from the Street News

■ Coconut oil is the latest food to capture the imagination of food faddists. Health claims include weight loss, improved cardiovascular health, prevention of dementia and anti-bacterial agent. Little evidence exists to support any of these claims. Coconut oil contains medium-chain triglycerides (MCTs), which have a small effect on weight loss, but the MCT content in coconut oil is much lower than used in weight-loss studies. **It's not likely that coconut oil has any significant effect on weight loss.** Coconut oil is probably bad for cardiovascular health because it increases LDL cholesterol, which is associated with coronary artery disease. There is no evidence that coconut oil promotes brain health, prevents dementia or improves immunity. The widely promoted health benefits of coconut oil are based more on hype than reality. (Nutrition Action Health Letter, December 8, 2014) ■



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BY STEVE BLECHMAN AND THOMAS FAHEY, EdD

## HOW DOES Alcohol Affect Health?

The link between alcohol and health is confusing to the average person. For years, coaches, religious groups, and most health experts warned us to stay away from alcohol. In the United States, we had a constitutional ban on the sale, importation and transportation of alcoholic beverages that remained in place from 1922 to 1933. Our views about alcohol changed gradually beginning in the 1990s when large population studies showed that moderate alcohol consumption promoted longevity and reduced the risk of heart disease. A panel of 41 international scientists who studied the effects of alcohol on health concluded that moderate alcohol consumption (one or two drinks a day, depending on body size) was beneficial. **Alcohol decreases blood clotting, reduces inflammation and increases HDL—the good cholesterol.** However, excessive alcohol consumption is linked to high blood pressure, cancer, domestic violence and accidents. They concluded that the American view of alcohol is probably a result of the Puritans landing on Plymouth Rock before the Italians got to America. (Medscape, October 30, 2014)



## Wine & Exercise REDUCE THE RISK OF HEART ATTACK

Scientists have long suspected that red wine is protective against heart disease. About 50 years ago, scientists identified the concept of the French paradox. The French have the lowest heart disease rate in the world yet eat famously rich diets. The French drink a lot of red wine, which is thought to protect the heart. **Researchers from the Czech Republic**

in a study on 146 healthy adults, found that both red and white wine reduced the risk of heart disease but only when accompanied by exercise. Drinking wine and exercise reduced blood cholesterol and increased heart-healthy HDL cholesterol. (Paper presented at the European Society of Cardiology Annual Congress, August 31, 2014)



## Belly Fat INCREASES the Risk of SUDDEN CARDIAC DEATH

Sudden cardiac death is rare, particularly in athletes. In people under 35 years of age, a condition called hypertrophic cardiomyopathy is the most common cause. In older adults, coronary artery disease is usually the culprit. A study led by Selcuk Adabag from the Veterans Affairs Medical Center in Minneapolis found that abdominal obesity increased the risk of sudden cardiac death by 100 percent compared to abdominally lean people. Abdominal obesity was identified by high body mass index (weight proportional to height), waist circumference and waist-to-hip ratio. The results were adjusted for the effects of high blood pressure, diabetes, abnormal blood fats and the presence of heart disease, heart failure and heart enlargement. They speculated that abdominal fat deposition might increase whole body inflammation. (Heart, published online November 19, 2014)

## DEADLY SKIN CANCER RATES INCREASING

Melanoma is an extremely aggressive form of cancer. The 10-year survival rate of untreated melanoma is approximately zero. Each year physicians in the United States diagnose 76,000 new cases of melanoma and report more than 9,700 deaths. The death rate from melanoma in the United States has increased consistently since 1930. **Cancer specialists put much of the blame on excessive sun exposure and the use of sun tanning beds.** While fair-skinned people are at greatest risk, melanoma can also strike people with darker skin. Dermatologists recommend that people limit exposure to ultraviolet light and use sunscreen. (Nature, 515 (7527): s108-s126, 2014)

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## MASSAGE REDUCES Muscle Stiffness

■ Post-exercise soreness is painful and debilitating. Eccentric exercise (lengthening muscle contractions), such as downhill walking or negatives, often causes sore muscles by triggering muscle injury and secondary muscle inflammation. Most studies found that popular remedies such as ice, non-steroidal anti-inflammatory drugs (e.g., Advil), and heat do not speed recovery. **Several recent studies found that massage decreased post-eccentric exercise inflammation and promoted recovery, particularly if done immediately after exercise.** An Australian study showed that massage decreased muscle stiffness, even in people who hadn't exercised. They measured the stiffness of the calf muscles using a technique called ultrasound shear elastography. Massage reduced stiffness for only a short time, but it was effective. (Scandinavian Journal of Medicine Science Sports, published online December 8, 2014)



## Air Pollution and Health Clubs

■ Gather 100 or so exercising sweaty people in a large room and you would expect some pungent odors. A study led by Carla Ramos from the University of Lisbon in Portugal showed that gym air pollution goes way beyond the smell of sweat. Air-quality measurements in 11 large health clubs in Lisbon showed that levels of carbon dioxide, dust, formaldehyde and carbon monoxide exceeded public health standards. **Sources of the air pollution included chemicals used for cleaning, inadequate sanitation and high gym use rates.** Air quality was measured during the late afternoon and early evening when the gyms were most crowded. The poor air quality could contribute to fatigue and trigger lung problems such as asthma and shortness of breath. (Building and Environment, 82:349-360, 2014)



## EXCESSIVE ENDURANCE EXERCISE CAN DAMAGE THE HEART

■ Marathons, ultra marathons and triathlons are extremely popular. Many people like the challenge of hardcore endurance sports. Is this healthy? Regular, moderate-intensity exercise is critical for health and longevity. The American College of Sports Medicine recommends that people exercise at a moderate intensity a minimum of 150 minutes a week. A review of literature by Jamie Seidl and Chad Asplund concluded that excessive exercise might be unhealthy. They cited several clinical case studies that suggested that long-term participation in endurance events causes heart abnormalities and may lead to sudden death. Veteran marathon runners showed an increased incidence of coronary artery disease and increased heart size compared to non-runners. Long-time runners were five times more likely to suffer from heart rhythm disturbances. They concluded that while regular exercise is critical for health, you can get too much of a good thing. (Current Sports Medicine Reports, 13: 361-364, 2014)

## The Annual Physical is a WASTE OF MONEY

■ The physical exam is an annual ritual that many people get to promote health and help them live longer. Ezekiel Emanuel, vice provost at the University of Pennsylvania, questioned its value. Studies of the effects of health exams administered between 1963 and 1999 showed no reduction in annual death rates or deaths from cancer or heart disease. Consequently, the United States Preventive Services Task Force and Canadian medical guidelines either have no recommendations about annual physicals or recommend against them. Physical exams do almost nothing to avert leading causes of death such as unintentional injuries or suicides. They also have little effect on chronic diseases such as Alzheimer's. Physical exams increase the risk of false positives that are incredibly expensive to the health care system. Abnormalities in routine blood tests, for example, often lead to additional expensive tests that usually don't find anything. Health habits that promote health and longevity include regular physical activity, annual flu shots, proper nutrition and a colonoscopy every 10 years after age 50. (New York Times, January 9, 2015) ■

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*My girlfriend asked me if I had breast implants. I told her no, that I was using [ABT]. My breasts are plumping up and coming out of my bras at the top. — PW*

*My PMS breast pain and swelling was so bad that I could not stand to touch my breasts and even the shower hurt. Now after using [ABT] I have no pain. — EA*

*[I] have had a patient on [ABT] with amazing results! She is 40 with three children and a 120 lb weight gain from the last child. After losing that weight, she had drooping ... [with] her breasts. [After 3-4 months of ABT] she has increased firmness [and] size... I AM AMAZED! - JS, Clinical Pharmacologist*

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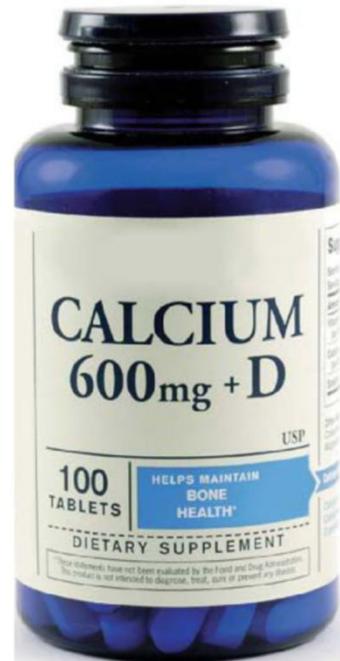
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BY STEVE BLECHMAN AND THOMAS FAHEY, ED.D

# Combining Vitamin D + Calcium Supplements CAN BE DANGEROUS

■ Calcium and vitamin D supplements are extremely popular and have individually been touted as important health promoters. Health experts often recommend calcium supplements for strengthening bone, improving blood clotting, and optimizing nerve conduction and muscle contraction. Vitamin D supplements have been recommended for preventing cancer, heart disease, fractures and falls, autoimmune diseases, flu, type 2 diabetes and depression. A review of literature by British researchers cautioned that the combination of calcium and vitamin D supplements could be dangerous because they might promote heart attack and increase blood pressure, abnormal blood fats and insulin resistance. One study in women showed that a supplement containing a combination of calcium and vitamin D reduced the risk of breast and colon cancer by nearly 20 percent but increased the risk of heart attack by 24 percent. More research is needed on the combination of these supplements because of their widespread use.

(Atherosclerosis, 238: 388-398, 2015)



## GREEN TEA EXTRACT: The Good, the Bad, and the Ugly

■ Epigallocatechin gallate (EGCG) is a polyphenol found in green tea extract that enhances the action of insulin, improves blood vessel health, lowers blood pressure and promotes weight loss. However, a study on mice from Penn State University found that EGCG was toxic to the liver, but pretreatment with the same supplement reduced its poisonous effect. **People should be extremely careful about taking supplements that affect individual performance or physiological variables.** While they might have some beneficial effects, they could also have serious side effects. (Food and Chemical Toxicology, 76: 103-108, 2015)

## WHEY PROTEIN SUPPLEMENTS PRESERVE LEAN MUSCLE

■ Muscle is extremely difficult to preserve when cutting fat for a contest. During reduced caloric consumption (dieting), the body uses energy from protein for fuel. In other words, the body feeds on itself. Amy Hector and Stuart Phillips from McMaster University in Canada and colleagues found that whey protein supplements could prevent decreases in muscle protein synthesis during weight loss. They studied men and women age 35 to 65 years old who consumed 750 fewer calories than normal. They supplemented the diets with either whey or soy protein. Whey protein effectively prevents decreases in muscle protein synthesis during weight loss. (Journal Nutrition, published online December 17, 2014)

## VITAMIN D HAS A SMALL EFFECT On Muscle Strength

■ Vitamin D is synthesized in the body in a reaction involving sunlight. Vitamin D can also be consumed in the diet by eating fatty fish, mushrooms and supplements. Several recent studies have linked low vitamin D levels to poor bone health, muscle weakness, deficiencies in reproductive hormones, low aerobic capacity and increased body mass index (the proportion of weight to height). **A meta-analysis by researchers from Belgium of 30 randomized controlled studies involving nearly 6,000 people showed that vitamin D supplements increased muscle strength slightly but had no effect on muscle mass or power.** The supplement worked best in people who were vitamin D deficient (less than 30 nmol per liter) and then people over 65. The recent enthusiasm about vitamin D supplements for athletes seems to be more hype than substance. Vitamin D is important but it is not a game changer for most. (Journal of Clinical Endocrinology and Metabolism, 99: 4336-4345, 2014)

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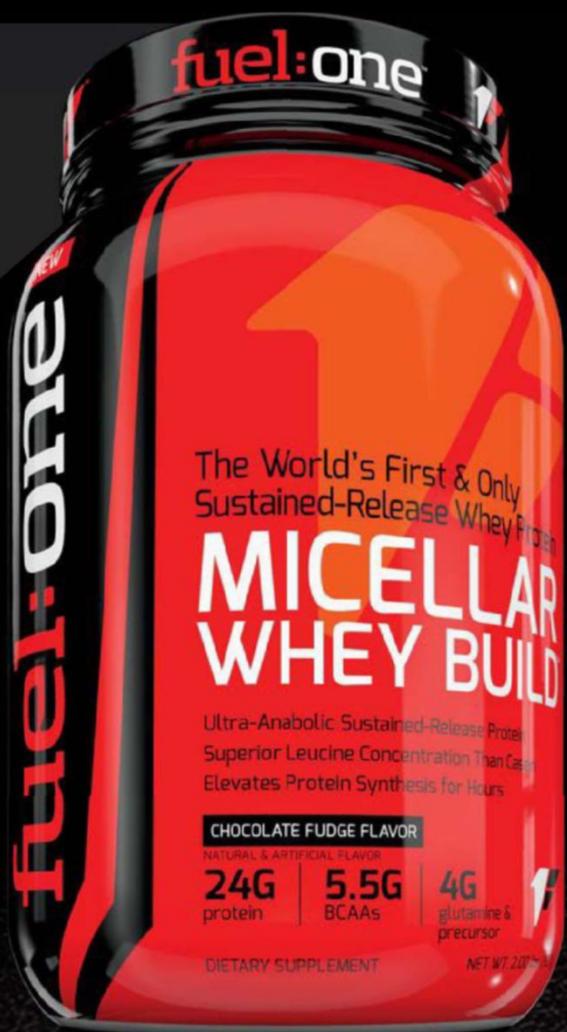
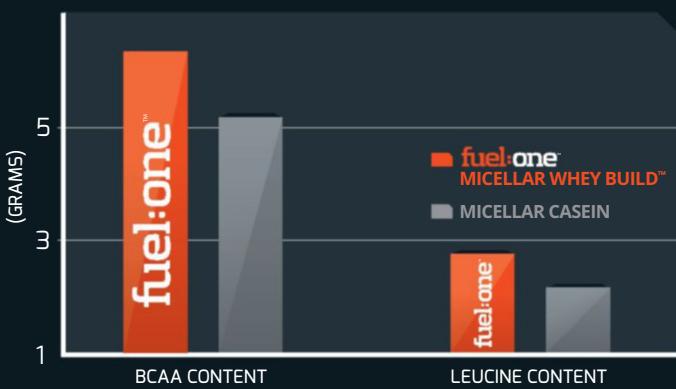
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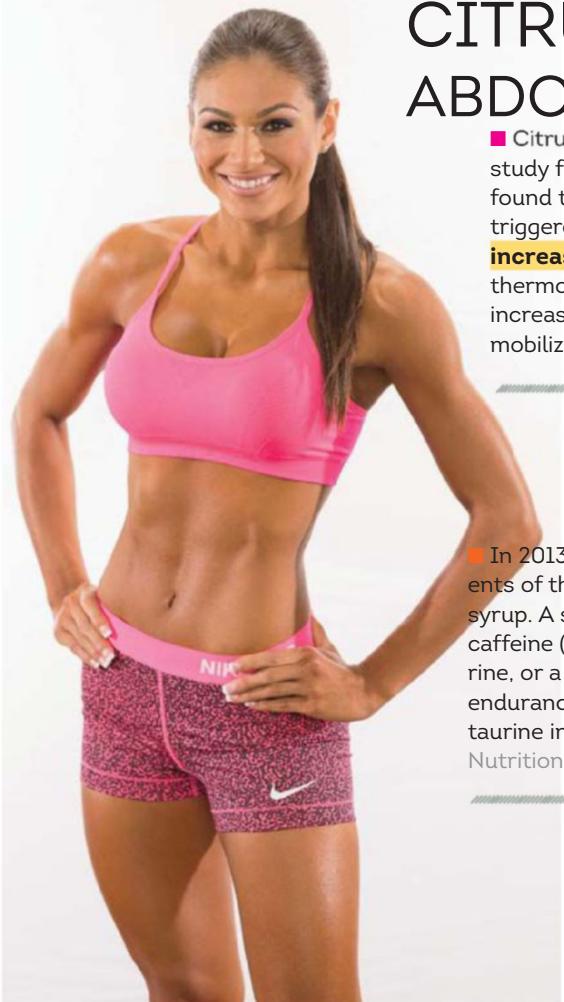
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## CITRULLINE PROMOTES ABDOMINAL FAT LOSS

■ Citrulline is an amino acid that promotes protein synthesis and fat loss. A French study from the University of Paris Descartes on overweight rats fed high-fat diets found that supplementing citrulline reduced blood sugar production in the liver and triggered abdominal fat loss. **Citrulline increases brown fat activity, which increases caloric expenditure and promotes fat burning.** Brown fat is a highly thermogenic tissue that dissipates energy as heat instead of storing it as fat. Citrulline increased levels of hormone-sensitive lipase by 150 percent, which also promoted fat mobilization and use. (Molecular Nutrition Food Research, 58: 2320-2330, 2014)



## ALPHA-LIPOIC ACID PROMOTES Energy Metabolism & Fat Loss

■ Lipoic acid supplements increase the size and number of cell mitochondria (Metab Clin Exper 59: 967, 2010). The mitochondria are the powerhouses of the cells that provide the body's energy needs, determine endurance exercise capacity and greatly influence lifespan. Lipoic acid protects the mitochondria from highly reactive free radicals produced naturally during metabolism. It also helps stabilize blood sugar regulation. Supplementing lipoic acid in aging mice improved energy metabolism, increased cell mitochondria production and decreased fat. A University of Buffalo study on obese rats led by David Williamson and Zhuyun Li showed that lipoic acid supplements improved markers of oxidative metabolism and cell signaling. Alpha-lipoic acid shows some promise as a weight-loss and anti-aging supplement. (Lipids, 49: 1193-1201, 2014)

## Combining Caffeine with Taurine Has ANTAGONISTIC EFFECTS

■ In 2013, worldwide sales of energy drinks exceeded \$50 billion. The principal ingredients of these beverages are typically caffeine, taurine and usually high fructose corn syrup. A study from Colombia found that identically tasting beverages containing either caffeine (80 milligrams), taurine (1,000 milligrams), a combination of caffeine and taurine, or a commercial energy drink (Red Bull) had no effect on cardiorespiratory fitness, endurance, strength, power or cognitive ability. For best performance results, skip the taurine in your energy or pre-workout drink. (Journal International Society Sports Nutrition, 11:44, 2014)

## BEETROOT IS A CARDIOVASCULAR “ELIXIR VITAE”

■ The elixir vitae is a mythical potion that grants the drinker eternal youth. It was a popular topic in ancient Chinese and Indian literature and was linked to the Fountain of Youth in America. Modern supplement makers have searched for it for more than 100 years. We may have found it in the simple beet. A review of literature by Richard Bloomer, William Clements and Sang-Rok Lee from the University of Memphis in Tennessee concluded that beetroot juice is a super food that reduces blood pressure, increases blood flow, enhances the driving pressure of oxygen during exercise or altitude exposure, and improves exercise efficiency. **Beetroot has beneficial effects after a single serving or regular use.** The famous explorer Ponce de Leon didn't have to search endlessly for the Fountain of Youth— he could have grown it in his garden. (Nutrients, 6: 5224-5264, 2014) ■



# THE FINAL STEP TO A Sexy, Lean Body



*Carol Saraiva*

CAROL SARAIVA  
INTERNATIONAL FITNESS MODEL

Do you struggle with shedding those last few pounds to accentuate your sexy, lean body? All too often, no matter how hard you work out and diet, you just can't seem to lose those last few pounds to highlight your muscle tone and lean physique.

The fact is, most women are storing 5-10 lbs. of excess water, causing them to look soft and feel bloated. Fortunately, XPEL, the powerful all-natural diuretic, can help you drop water weight fast. It's so effective that within 12 hours, XPEL will begin to shed the excess water weight and reveal your sexy, lean body.



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● BY LISA STEUER



## What are effective ingredients to treat skin discoloration?

Unevenness of skin tone is the number one complaint from women. There are dozens of products to help with discoloration, which often make promises that can't be kept. Unfortunately, even the best products will take two to three months before improvement is noticed. I will highlight some of the key ingredients to look for so that you can be your own skin-care expert.

Brown spots on the face generally are a result of three factors:

**1. The sun:** sun spots (large looking speckled freckles called lentigines).

**2. After trauma:** Post-inflammatory hyperpigmentation, a condition in which an injury or inflammation attracts pigmentation to the area when the condition resolves (i.e., acne, rash, trauma).

**3. Hormones:** Melasma may occur during pregnancy or with birth control pills and presents as large brown patches over cheeks and forehead.

The quickest way to treat sun spots is with an Intense Pulse Light device, IPL or "photofacial." This device may make the other two causes of pigmentation worse, as these are caused by inflammation and can unpredictably darken from any irritation to the skin.

All types of discoloration have one thing in common—strict sun protection and avoidance are mandatory. No matter the cause of your discoloration, those pigmented cells are programmed to darken immediately with ultraviolet

## BEAUTY QUESTION OF THE MONTH

with Dr. Jennifer Haley

light and heat. You may spend a month successfully evening out your complexion and one day in the sun will ignite those pigment cells to fire up and darken. So, seek shade, enjoy the outdoors early and late in the day, wear a wide-brimmed hat and apply a sunscreen with SPF 30-plus with zinc oxide every single morning. My favorite daily sunscreens are EltaMD Physical, Daily or Clear.

### Lightening agents to look for include:

**1. Hydroquinone:** Inhibits pigment (melanin) formation. The most widely available ingredient with 2 percent strength over the counter and 4 percent through a dermatologist. Hydroquinone works well, but has been under scrutiny for questionable health risks with long-term, widespread use. Risks include allergy, skin irritation and potential to darken skin. It is best to use for two- to three-month bursts and use a safer alternative the rest of the time. It is not safe to use during pregnancy.

**2. Arbutin:** A natural form of hydroquinone derived from plants, including bearberry, blueberry, mulberry and cranberry. Has similar mechanism and effects as hydroquinone with better safety profile.

**3. Kojic acid:** Antioxidant that works by breaking down the pigment in the skin and preventing its production. May cause skin irritation and is unstable in many formulations.

**4. Licorice (glabridin):** Non-toxic and slows pigment production, and is anti-inflammatory.

**5. Glutathione:** An antioxidant that inhibits pigment production. Difficult to absorb into cells, it is enhanced with vitamin C or E. N-acetyl cysteine orally will also boost its level.

**6. Niacinamide:** A form of vitamin B3 that inhibits the transfer of pigment to the skin's upper layer. Also anti-inflammatory, reduces acne and increases skin moisture.

**7. Azelaic acid:** Also works for acne and selectively works on overactive melanocytes so it won't affect normal pigment on skin.

**8. Vitamin C:** An antioxidant, also protects from sun damage but is unstable.

Penetration of these lightening agents will be enhanced if you apply a product that will exfoliate and loosen the bonds of the top layer of the skin. Plus, exfoliation will provide a healthy glow to skin and remove those top layers containing old pigmentation. Look for products containing retinol and glycolic acid.

Avoiding sugar is also helpful in controlling skin discoloration, as a sugar molecule is needed in pigment production. Other dietary changes, which may assist, include consuming foods with carotenoids and vitamin C.

### WIN A \$100 GIFT CERTIFICATE TOWARD SKIN CARE PRODUCTS!

Submit a question for Dr. Haley to answer in the next issue—if your question is chosen, you'll win a \$100 gift certificate toward her skin care line, Derivations! Email your question to [editor@fitnessrxwomen.com](mailto:editor@fitnessrxwomen.com) and be sure to include your contact info. A new winner will be chosen each month!

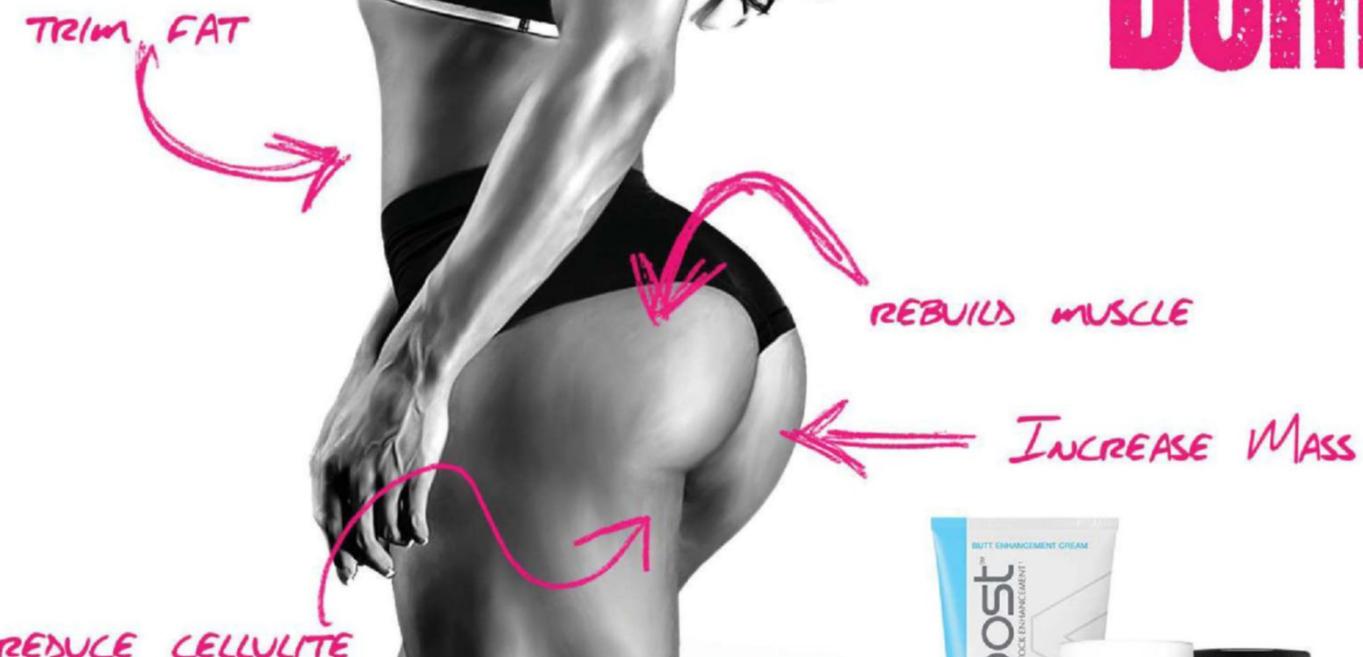
*Dr. Jennifer Haley is a board-certified dermatologist with a degree in Nutrition Science from Cornell University. She has been an NPC bikini competitor, consultant to the US Capitol, and is the co-founder of the skin care line, Derivations—which offers complimentary skin consultations. She enjoys an active lifestyle in Scottsdale, AZ and Montrose, CO with her husband and three boys. »*





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## SCIENTISTS FIND WRINKLE ENZYME

■ A scientific team at the University of British Columbia and Providence Health Care have found that an enzyme may be key in the aging of skin, according to ScienceDaily. Wrinkles are caused mostly by sun exposure, and the scientists found that genetically engineered mice who lacked the enzyme granzyme B had less wrinkled skin, despite repeated exposure to ultraviolet light. The findings were published in *Aging Skin*, and it's hoped that a drug could be further developed to block the activity of granzyme B, preventing the aging of tissues that depend on collagen— which not only includes skin, but blood vessels and lung passages as well. This means that this drug could be used not only for cosmetic reasons, but also possibly for life-threatening conditions, such as aneurysms and chronic obstructive pulmonary disease, which are caused by collagen and protein breakdown. The drug is currently being developed for testing. ("Scientist finds genetic wrinkle to block sun-induced skin aging," [www.sciencedaily.com](http://www.sciencedaily.com))

## SPA & WELLNESS Travel Trends

■ Here are some of the latest spa and wellness travel trends that are expected to increase throughout this year:

**THERMAL SPRINGS:** This is actually one of the oldest spa treatments, but more spa-goers are discovering the benefits of thermal springs than ever before— which include improving skin conditions to pain relief.

### WELLNESS RETREATS AND VACATIONS:

Instead of a typical vacation, many people are opting for yoga retreats, healthy honeymoons and specialty fitness retreats headlined by

wellness gurus. Some exotic locations include TheBodyHoliday in St. Lucia, F12 Fitness Retreat in Spain and Thanyapura Triathlon in Thailand.

### STRESS MANAGEMENT:

More hotels and spas are offering stress management and recovery programs that include special therapies, consultations and healthy nutrition. There are even group activities like yoga, cooking classes and yoga that are offered as part of many of these programs. ("Top Wellness Spa Travel Trends for 2015," [www.healthandfitnesstravel.com](http://www.healthandfitnesstravel.com))

## PRODUCTS WE LOVE: HAIR WARRIOR

■ During workouts, sweat can take a toll on your hair. So that's why two lifelong friends and yogis, Abby Curtis and Alex Stark, created Hair Warrior, along with a team of chemists and hair stylists. It's meant to be applied before your workout and is heat activated, adding hydration and protection to your hair during physical activity, as well as reducing frizziness and increasing shine and body. It's available at many gyms and yoga studios nationwide, and also online at <http://hairwarrior.co>.



## POST-WORKOUT Beauty

■ Sweating at the gym can wreak havoc on your skin, so a post-workout beauty routine is essential. Here are a few tips to keep your skin clean and clear:

- Even if you don't have time to take a shower immediately after you finish your workout, wash your face with soap and cold water. If you have sensitive skin, try Aveeno Clear Complexion Cleansing Bar to avoid irritation and dryness.
- Try a face mask like masqueBAR by LOOK BEAUTY's Anti-Blemish Mud Mask (available at Target). This anti-blemish mask is non-drying, helping to cleanse, purify and balance troubled skin. It contains skin-soothing and oil-controlling ingredients like tea tree, kaolin and vitamin A.
- Don't forget to moisturize. Using an oil-free formula to avoid oil-clogging ingredients. ■

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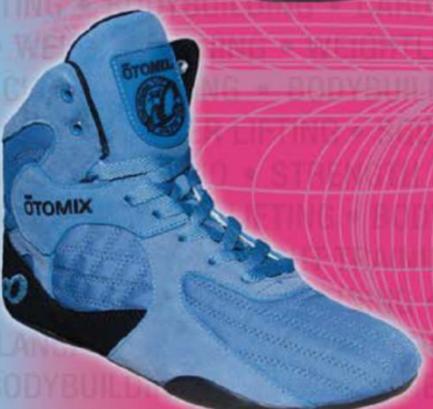
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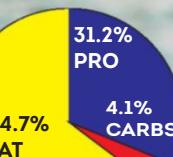
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# BUTTERED ALMOND SALMON

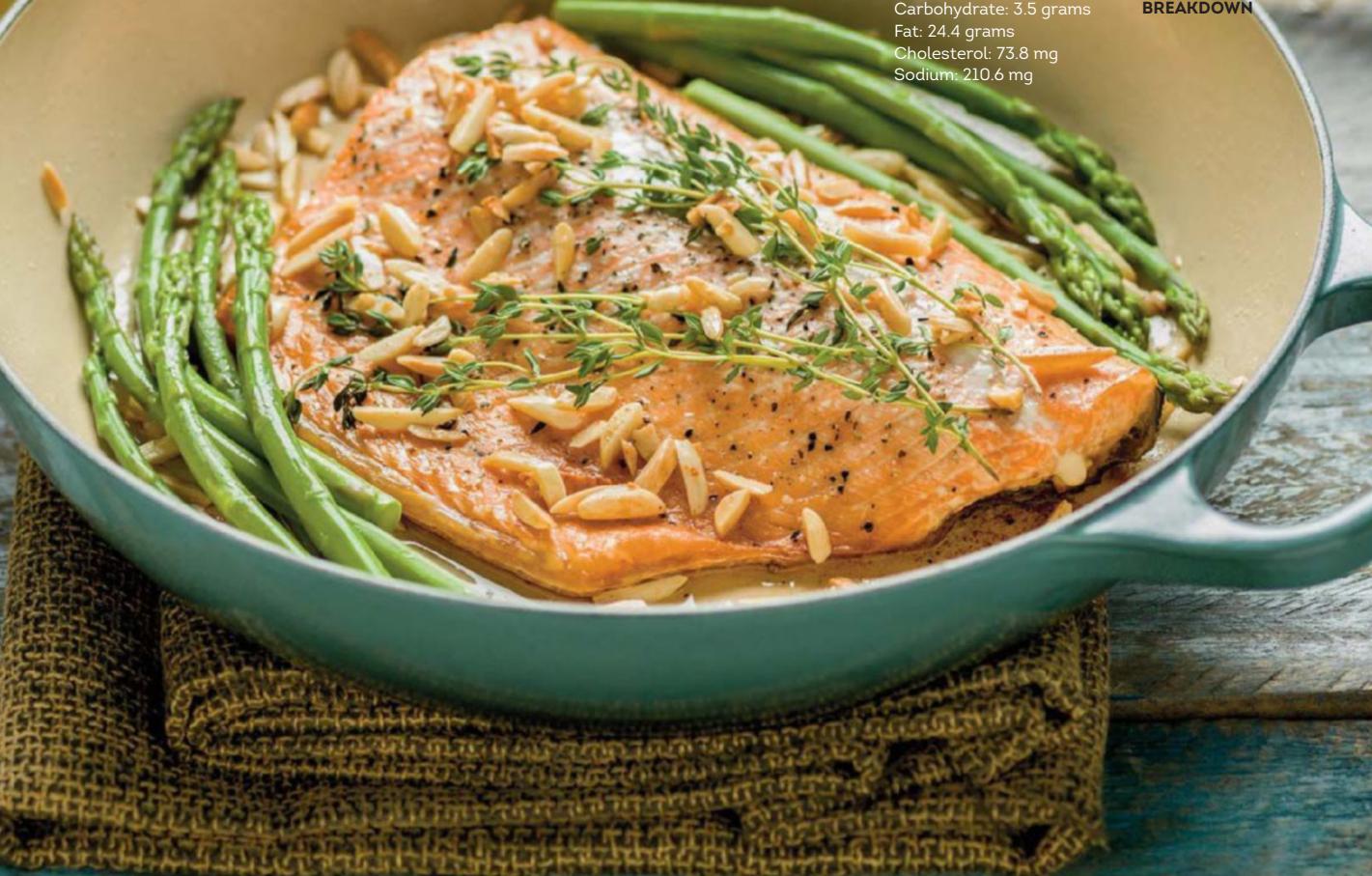
This Mediterranean-style entrée uses an old gourmet chef trick of cooking salmon in a blend of extra-virgin olive oil and butter to achieve culinary nirvana. Friendly fats (EPA/DHA) never tasted so good!

## Totals Per Serving

Calories: 336.4  
Protein: 26.4 grams  
Carbohydrate: 3.5 grams  
Fat: 24.4 grams  
Cholesterol: 73.8 mg  
Sodium: 210.6 mg



## NUTRITIONAL BREAKDOWN



### INGREDIENTS:

- 1 TABLESPOON EXTRA-VIRGIN OLIVE OIL
- 1½ TABLESPOONS BUTTER
- ½ CUP SLIVERED ALMONDS, BLANCHED
- 16-20 OUNCE SALMON FILET
- ¼ TEASPOON SALT, DIVIDED
- ¼ TEASPOON FRESHLY GROUND BLACK PEPPER
- 4 FRESH THYME SPRIGS

Preheat oven to 450 degrees. Coat baking dish with olive oil and place in the hot oven for 5 minutes. Melt butter in a small saucepan over medium heat on the stove. Add almonds and cook until some have browned while sprinkling with 1/8 teaspoon salt. Remove baking dish from the oven and place salmon, skin side down, in the pan. Sprinkle with 1/8 teaspoon salt and 1/4 teaspoon pepper and spoon almonds on top. Top with thyme springs and place salmon in the oven. Cook for 8-10 minutes or until fish is just cooked through. Remove thyme before serving. Makes 4 servings.

### NUTRITIONAL PROFILE (PER SERVING)

MACRONUTRIENTS		VITAMINS	
KCAL:	336.497	A (RE):	54.650
PRO g:	26.445	C mg:	0.320
CHO g:	3.520	THIAMIN mg:	0.291
CHOL mg:	73.813	RIBOFLAVIN mg:	0.563
FAT Total g:	24.410	NIACIN mg:	9.554
SATURATED FAT g:	5.033	PYRIDOXINE (B6) mg:	0.950
MONOUNSATURATED FAT	12.024	FOLATE mcg:	37.501
POLYUNSATURATED FAT	5.640	COBALAMIN µg:	3.615
TRANS FATTY ACID g:	0.178	MINERALS	
DIETARY FIBER, TOTAL g:	1.856	SODIUM mg:	210.686
SUGAR, TOTAL g:	0.843	POTASSIUM mg:	679.324
		CALCIUM mg:	59.085
		IRON mg:	1.569

# ARTICHOKE RICE PILAF

*This healthy side dish is the perfect accompaniment to any surf or turf protein entrée you serve.*

Heat oil in large sauté pan with a lid. Add garlic and sauté over medium heat. Add rice and sauté about a minute. Pour hot broth over rice. Stir briefly, add thyme, bay leaf, salt and pepper. Bring to a boil over high heat. Add artichokes, return to a boil and reduce heat to simmer. Cover tightly and let simmer for 18 minutes or until liquid is absorbed and rice is tender. Remove bay leaf, add parsley and pine nuts and fluff rice before serving. Makes 4 servings.

## INGREDIENTS:

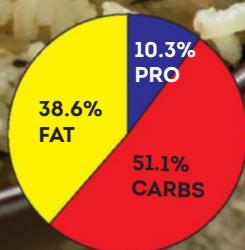
- 1 TABLESPOON EXTRA VIRGIN OLIVE OIL
- 2 GARLIC CLOVES, MINCED
- 1½ CUPS LONG GRAIN WHITE RICE, DRY
- 2½ CUPS HOT CHICKEN BROTH (OR VEGETABLE BROTH)
- ½ TEASPOON DRIED THYME
- 1 BAY LEAF
- ¼ TEASPOON SALT
- ¼ FRESH GROUND TEASPOON BLACK PEPPER
- 1 10-OUNCE PACKAGE FROZEN ARTICHOKE HEARTS
- ¼ CUP CHOPPED PARSLEY
- 2 TABLESPOONS TOASTED PINE NUTS

## Totals Per Serving

Calories: 159.6  
Protein: 4.2 grams  
Carbohydrate: 21 grams  
Fat: 7 grams  
Cholesterol: 1.3 mg  
Sodium: 195.7 mg



## NUTRITIONAL BREAKDOWN



# TEX-MEX BREAKFAST SCRAMBLE (MIGAS)

Add a little heat and flavor to your boring morning eggs with this fabulous Southwestern scramble.

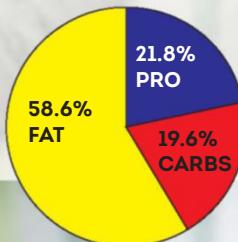


In a small bowl lightly beat the eggs and salsa together and set aside. Melt the butter and olive oil together in a skillet. Add the tortilla pieces and sauté until softened. Add the chopped onion and sauté until translucent. Stir in the chopped green chilies, tomato and black beans. Pour the egg mixture into the skillet and scramble until eggs set. Remove skillet from the heat and sprinkle avocado, cilantro and cheese onto the eggs and stir, chop and fluff to combine. Top with more salsa and serve with warm tortillas if desired. Makes 3 servings.

#### Totals Per Serving

Calories: 257  
Protein: 14.1 grams  
Carbohydrate: 12.7 grams  
Fat: 16.8 grams  
Cholesterol: 144.2 mg  
Sodium: 314.5 mg

#### NUTRITIONAL BREAKDOWN



#### INGREDIENTS:

4 LARGE EGGS  
OR  
2 EGGS AND 4 ADDITIONAL WHITES  
OR  
8 EGG WHITES  
2 TABLESPOONS SALSA  
1 TABLESPOON BUTTER  
1 TABLESPOON OLIVE OIL  
2 6-INCH CORN TORTILLAS, TORN INTO DIME-SIZE PIECES  
1/4 CUP FINELY CHOPPED WHITE ONION  
2 TABLESPOONS CHOPPED GREEN CHILIES  
1 MEDIUM TOMATO, SEED AND PULP REMOVED, CHOPPED  
1/4 CUP BLACK BEANS  
1/4 CUP CHOPPED AVOCADO  
2 TEASPOONS FRESH CILANTRO  
2/3 CUP SHREDDED MEXICAN CHEESE, LIKE CHIHUAHUA (CHEDDAR OR MONTEREY JACK WORK AS WELL)  
3 ADDITIONAL WARM CORN TORTILLAS (OPTIONAL)

#### NUTRITIONAL PROFILE (PER SERVING)

MACRONUTRIENTS		VITAMINS	
KCAL:	257.638	A (RE):	99.723
PRO g:	14.126	C mg:	10.880
CHO g:	12.745	THIAMIN mg:	0.083
CHOL mg:	144.254	RIBOFLAVIN mg:	0.432
FAT Total g:	16.887	NIACIN mg:	0.635
SATURATED FAT g:	6.318	PYRIDOXINE (B6) mg:	0.158
MONOUNSATURATED FAT g:	7.599	FOLATE mcg:	56.009
POLYUNSATURATED FAT g:	1.644	COBALAMIN µg:	0.420
TRANS FATTY ACID g:	0.155	MINERALS	
DIETARY FIBER, TOTAL g:	3.054	SODIUM mg:	314.506
SUGAR, TOTAL g:	3.049	POTASSIUM mg:	368.947
		CALCIUM mg:	121.003
		IRON mg:	1.328

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# FIT CLUB CHOCOLATE FROSTY SHAKE

*Is it a Blizzard? A sundae you can sip? A shake that can stand up to a spoon? With this list of naturally wholesome ingredients, all that matters is it's delicious!*

**INGREDIENTS:**

- 1 CUP COLD UNSWEETENED ALMOND MILK
- 1 TABLESPOON CASHEWS
- 1 TABLESPOON COCOA
- 1/4 CUP AVOCADO, CHILLED
- 1 TABLESPOON CHOPPED DATES
- TRUVIA TO TASTE (ABOUT 1 TABLESPOON)
- 1-2 ICE CUBES

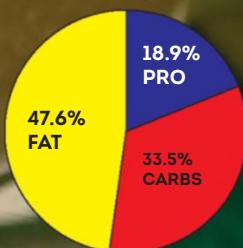
Process in a blender until finely chopped, but not completely liquefied. Makes 1 serving.

**Totals Per Serving**

Calories: 2279  
 Protein: 11.7 grams  
 Carbohydrate: 20.7 grams  
 Fat: 13 grams  
 Cholesterol: 26 mg  
 Sodium: 43.8 mg

**NUTRITIONAL PROFILE (PER SERVING)**

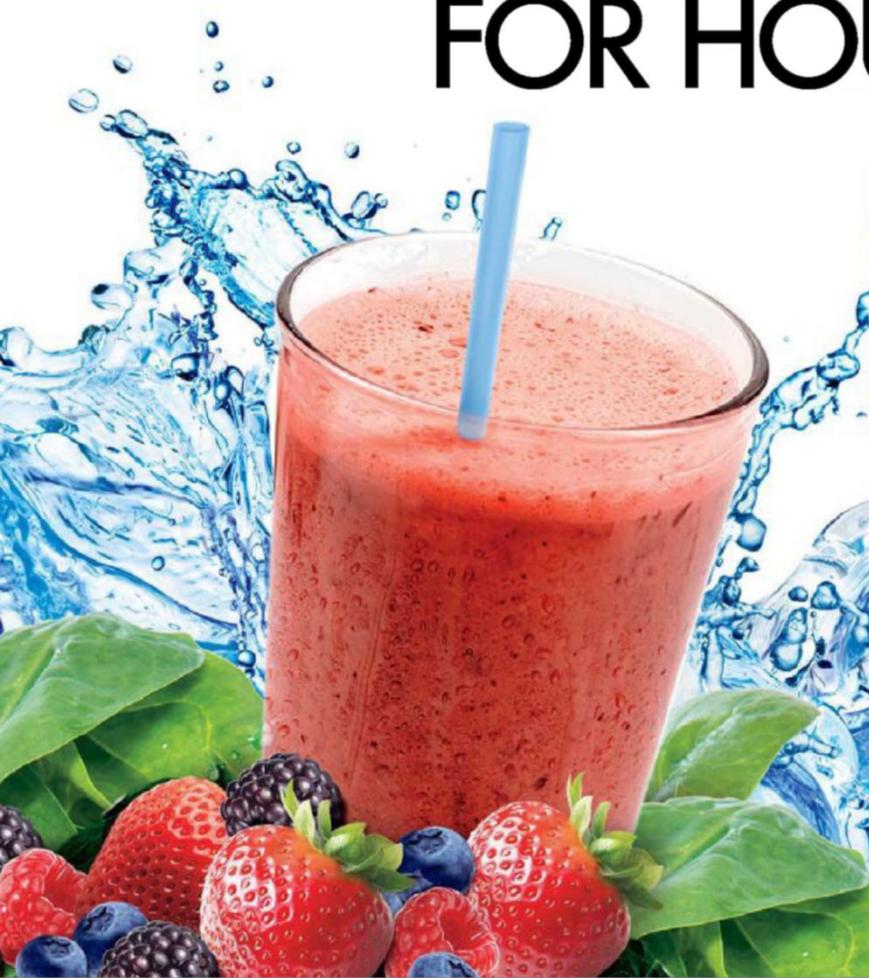
MACRONUTRIENTS		VITAMINS	
KCAL:	227.908	A (RE):	14.999
PRO g:	11.700	C mg:	2.716
CHO g:	20.674	THIAMIN mg:	0.051
CHOL mg:	0.268	RIBOFLAVIN mg:	0.094
FAT Total g:	13.066	NIACIN mg:	0.839
SATURATED FAT g:	1.926	PYRIDOXINE (B6) mg:	0.130
MONOUNSATURATED FAT g:	6.231	FOLATE mcg:	34.957
POLYUNSATURATED FAT g:	3.708	COBALAMIN µg:	0.060
TRANS FATTY ACID g:	0.000	MINERALS	
DIETARY FIBER, TOTAL g:	7.157	SODIUM mg:	43.843
SUGAR, TOTAL g:	10.002	POTASSIUM mg:	597.873
		CALCIUM mg:	71.660
		IRON mg:	2.641

**NUTRITIONAL BREAKDOWN**


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- Lose weight with green coffee<sup>2</sup>
- Plus, Appethyl™ – a healthy spinach extract

### HOW IT WORKS



<sup>1</sup>Scientific research suggests people taking kelp fiber (sodium alginate) reduced their appetite for hours after a meal.

<sup>2</sup>Average weight loss with the key ingredient (200mg of green coffee bean extract) is 10.95 lbs. in a 60-day study with a low-calorie diet, and 3.7 lbs. in a separate 8-week study with a calorie-reduced diet and moderate exercise.

**HYDROXYCUT.COM**

\*\*Based on AC Nielsen FDMx unit sales for Hydroxycut® caplets. Read the entire label before use. © 2015



**Walgreens**

**CVS/pharmacy**



**meijer**

**HYDROXYCUT**

# GET IN COVER GIRL SHAPE!

**8-WEEK TOTAL BODY TRANSFORMATION**

with Dianna Dahlgren

WE'VE ALL SEEN A MAGAZINE COVER AND THOUGHT,  
**"I WANT TO LOOK LIKE THAT!"** WE WISH FOR THE DEFINITION,  
THE ABS, THE TIGHT CURVES...**THE FEATURES OF A WOMAN**  
**LIVING THE FIT LIFE TO THE FULLEST.** WELL, IT'S TIME TO STOP  
JUST WISHING FOR IT AND **START WORKING TOWARDS IT**  
**WITH OUR GET IN COVER GIRL SHAPE PROGRAM.**

**HERE'S THE DEAL:** very few fitness models walk around cover ready all year round. There is usually some preparation involved to achieve looking their very best. Our cover model IFBB Bikini Pro and five-time Miss Supercross Dianna Dahlgren was no different. She embarked on an eight-week program to get in top form and she shared all the details with us so we could share them with you!

During this program, Dianna dropped 8.5 pounds over the eight weeks, resulting in a lean and fit cover ready physique. And she wasn't a slave to cardio or on a wacky diet. Dianna employed intense weight training, HIIT and flexible dieting for her shoot prep, all of which she has grown to love under the guidance of her coach Layne Norton.

However, you don't need to be prepping for a shoot to benefit from this program. "I think women who love to lift or want to start playing around with more lifting would love it," explains Dianna. She adds that the program would also benefit those "who want to build their metabolism or just want to try something different for calorie burning."

By LISA STEUER and JAIME BAIRD | Photography by MARC ROYCE



“

I STRUGGLED WITH  
MY FITNESS A LOT,  
BUT I WAS ABLE TO  
OVERCOME AND STILL  
LOVE LIFTING,  
TRAINING AND  
EATING HEALTHY.

”



Styling by Trish Stella

Hair and Makeup by  
Dimitris Giannetos

Top, shorts and footwear  
by Nike

# WHAT TO EXPECT

**INTENSE LIFTING:** The heart of this program is resistance training. You will seek hypertrophy pushing to lift as heavy as you safely can while keeping good form. This strategy is proven to burn fat. In fact, a study in the *Journal of American College of Nutrition* found that a resistance-training group lost about just as much weight as an aerobic-trained group— but the aerobic group lost 10 pounds of muscle, while the resistance training group only lost fat.<sup>1</sup>

All exercises will be performed as straight sets, unless otherwise noted. To increase intensity as the weeks progress, increase the weight lifted, decrease rest intervals, push for a few more reps, increase range of motion and/or slow down the pace.

**HIIT CARDIO.** To help Dianna lower her body fat for the shoot, she performed all high-intensity interval training sessions and no steady-state cardio. (Yes, you heard that right). Research indicates that excess post-exercise oxygen consumption—which is a measure of additional calories burned after training—is higher following HIIT compared to steady-state endurance training.<sup>2</sup> These HIIT sessions are brief, but seriously intense. The key is to push to an all-out effort during the work interval. The harder you work, the greater the metabolic disturbance and afterburn effect.

**LIMITED TRADITIONAL AB WORK.** Dianna doesn't do a lot of traditional abdominal training to get her fab abs. She relies mostly on her resistance training to give her core a workout (and good nutrition to keep her body fat in check). In fact, research indicates that squats and deadlifts are great for core strength (in one study, deadlifts activated certain core muscles roughly 70 percent more than some traditional core exercises).<sup>3</sup> Given the lifting and nutrition outlined in this program, traditional abdominal training is limited to once or twice a week.

**FLEXIBLE DIETING APPROACH.** Dianna doesn't believe in eating the same thing day in and day out or restricting any foods. Rather, she targets set macronutrient (protein, fat, carbs) grams per day with whatever foods she chooses. Dianna typically selects foods that are filling and nutritionally dense because she, in her words, "is a naturally hungry gal."

## the PROGRAM

### WEEKS 1-4

- » MONDAY: Squats
- » TUESDAY: HIIT & Abs
- » WEDNESDAY: Upper Body
- » THURSDAY: Rest
- » FRIDAY: Lower Body
- » SATURDAY: Upper Body & HIIT
- » SUNDAY: HIIT

### WEEKS 5-8

- » MONDAY: Squats
- » TUESDAY: HIIT & Abs
- » WEDNESDAY: Upper Body & HIIT
- » THURSDAY: Rest
- » FRIDAY: Lower Body
- » SATURDAY: Upper Body & HIIT
- » SUNDAY: Abs (Add HIIT Wks 7-8)

## the WORKOUTS

*Straight sets, unless otherwise noted.*

*Lift as heavy as you can while keeping good form.*

EXERCISE	REPS
<b>SQUATS</b>	
SET 1: WARM-UP	10-15 REPS (LIGHT WEIGHT)
SET 2: INCREASE WEIGHT	8-10 REPS
SET 3: SAME AS SET 2	
SET 4: INCREASE WEIGHT	5-8 REPS
SET 5/6: SAME AS SET 4	
SET 7: DECREASE WEIGHT	5-8 REPS
SET 8: SAME AS SET 7	
SET 9: DECREASE WEIGHT	5-8 REPS
SET 10: DECREASE WEIGHT	8-12 REPS
EXERCISE	SETS
<b>UPPER BODY 1</b>	
PULL-UP	3 X UNTIL FAILURE
SEATED CLOSE-GRIP ROW	3
DUMBBELL HAMMER CURL	3
LYING TRICEPS EXTENSION	3
LATERAL RAISE	3
FRONT RAISE	3
<b>LOWER BODY</b>	
DEADLIFT	4
LEG PRESS	4
BARBELL HIP THRUST	4
STEP-UPS	3
SEATED CALF RAISE	4
LEG EXTENSION MACHINE	4
LYING HAMSTRING CURL MACHINE	3
<b>UPPER BODY 2</b>	
PULL-UP	3 X UNTIL FAILURE
SHOULDER PRESS	3
CABLE BICEPS CURL	3
CABLE TRICEPS PRESSDOWN	3
BARBELL CHEST PRESS	3
PUSH-UPS	3

## HIIT Cardio

For Dianna's HIIT, she performed running sprints (flat and incline). You may choose to use other methods/equipment (i.e., bike, swim, stairs, sled push, row). The only stipulation is that the method allows you to perform an all-out effort safely.

### WARM-UP:

WARM-UP: 5-MINUTE LIGHT JOG THEN STRETCH

### INTERVALS:

ALL-OUT SPRINT - 30 SECONDS  
RECOVER - 90 SECONDS

WEEKS 1-4: REPEAT 8 TIMES  
WEEKS: 5-8: REPEAT 10 TIMES

### COOL-DOWN:

5-MINUTE LIGHT JOG  
THEN STRETCH



# Get It RIGHT



## SQUAT

Position the bar on your upper trap muscles. Stand with feet shoulder-width apart and toes turned out slightly. Keeping your abs tight, head up and torso upright, lower down until your thighs are parallel to the floor. Focus on pushing through your heels as you drive upward toward the starting position.

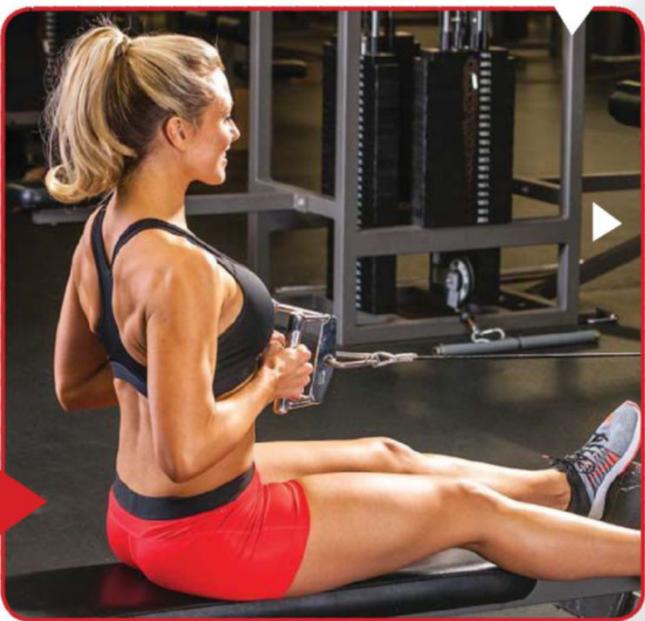
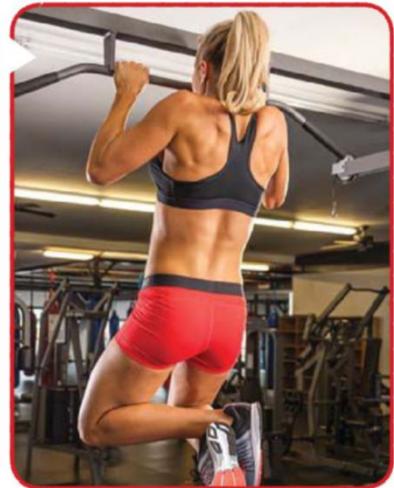


## Seated CLOSE-GRIP ROW

Keeping your back straight, pull the handle just below your chest while drawing your shoulders back. Slowly straighten arms and lean slightly forward to stretch the muscle before pulling back again.

## PULL-UP

Grab wider than shoulder-width apart. Pull your body up so that your chin is above the bar. Slowly come down to starting position. Use chin dip assist machine, bands or a spot, if needed.





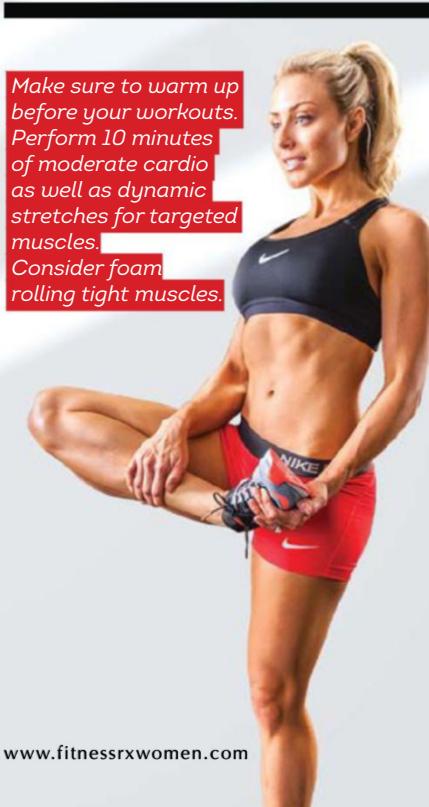
## DEADLIFT

Standing with your feet shoulder-width apart and toes pointed slightly outward, squat down and grasp the bar using a mixed grip. Keeping your back flat, chest up, arms straight, eyes forward and weight in the heels, stand up by extending the knees and driving your hips forward. Make sure to not shrug or lean backwards.



## Lying TRICEP EXTENSIONS

Lying on a flat bench holding a barbell or EZ bar, press the weight straight up toward the ceiling. Keeping your elbows stationary, slowly lower the barbell. Extend the weight back up to the starting position without locking out your elbows.



*Make sure to warm up before your workouts. Perform 10 minutes of moderate cardio as well as dynamic stretches for targeted muscles. Consider foam rolling tight muscles.*

## STEP-UP

Place your left foot on top of a bench/box. Pressing through that foot, straighten the leg to stand on top of the bench/box. Lower the right leg back down to the floor, keeping the left leg on the bench.

Repeat all reps on the left before switching to the other side. Hold dumbbells or barbell, for added challenge.





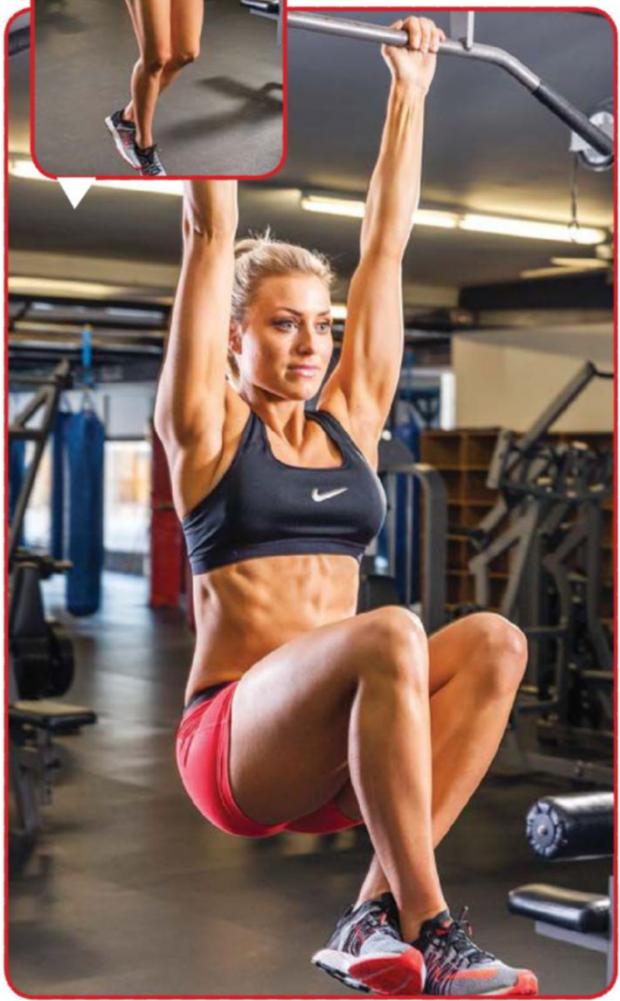
## Barbell HIP THRUST

Begin seated on the ground with a bench behind you. Place a barbell on your lap and lean against the bench. Lift your hips off the ground and position feet flat on the ground. Then, thrust your hips up vertically—your shoulder blades and feet should be supporting your weight. Slowly lower and repeat.



## Hanging KNEE-UPS

Hang from a bar (or ab straps) with legs fully extended. Lift knees toward your chest. Slowly lower to start. Do not swing.



### ABS 1

HANGING KNEE-UPS: 5 X 15 REPS  
PLANK: 3 X 60 SECONDS

### ABS 2

STABILITY BALL CRUNCHES: 3 X 25 REPS,  
SUPERSET WITH  
STABILITY BALL KNEE-INS: 3 X 12 REPS



## Shoulder PRESS

Hold a barbell or dumbbells at shoulder height with your palms facing forward. Press the weight straight up until your arms are just short of straight. Lower and repeat.

## Cable BICEPS CURL

Keeping elbows locked in at your sides, curl the bar up toward your chest. Return to the starting position.



**“I HAD TO LEARN HOW TO LOVE MY BODY, HOWEVER IT LOOKED, AS LONG AS I WAS BEING GOOD TO IT, TREATING IT RESPECTIVELY AND NOT BINGING OR STARVING MYSELF.”**

## NOT SHOWN

**DUMBBELL HAMMER CURL.** Begin holding dumbbells at your sides with a neutral grip. Keeping your palms facing toward your body, curl the dumbbells up toward your shoulders and slowly lower back to starting position.

**LATERAL RAISE.** Hold dumbbells at your sides. Keeping the elbows slightly bent, raise each arm out to the side so that your elbows and wrists are at shoulder height. Slowly return to starting position.

**FRONT RAISE.** Holding a dumbbell in each hand parallel to the front of your thighs, raise your arms to shoulder height and then lower down. Make sure to keep your neck and traps relaxed throughout the exercise.

**LEG PRESS.** Place feet on platform—higher emphasizes glutes, lower emphasizes quads. Drive through heels to press the platform out. Release lever and grasp handles. Lower sled and then press back out. Keep knees pointed same directions as feet.

**SEATED CALF RAISE.** Using seated calf machine, place the ball of your feet onto the step. Bring your heels as low as you can and press back up as high as you can on your toes.

**LEG EXTENSION MACHINE.** Adjust machine so the pad is just above your ankles and your back is pressed against the seat back. Slowly extend legs up until they are straight. Hold for two seconds, then return to starting position.

**LYING HAMSTRING CURL MACHINE.** Lie on the machine with your hips and torso pressed firmly on the bench. Position the back of your ankles on the roller pad and then bring your heels toward your butt. Slowly return the weight to the starting position.

**CABLE TRICEPS PRESSDOWN.** Begin with your elbows by your sides, holding the rope. Slowly extend arms straight down to your legs, keeping elbows pressed into your body throughout the exercise.

**BARBELL CHEST PRESS.** Lie on a flat bench. Using a medium-width grip, lift the bar from the rack and hold it straight over your chest. Slowly lower the weight until the bar touches your middle chest. Push the bar back to the starting position as you breathe out.

**STABILITY BALL CRUNCHES.** Sit on the stability ball with your feet flat on the floor. Walk your feet forward to lower your back onto the ball. Knees should be bent to about 90 degrees. Exhale as you contract your abdominal muscles and curl your shoulders and trunk toward your knees.

**STABILITY BALL KNEE-INS.** Begin in a plank position with your feet elevated on the stability ball. Pull your knees in towards your chest in a controlled manner squeezing your abs at the top of the movement. Hold for a second and slowly extend legs back into starting position.

# COVER GIRL Q&A

*Get to know AML Athlete,  
IFBB Bikini Pro and  
five-time Miss Supercross  
**Dianna Dahlgren***

**FRX:** *Squatting plays a big role in your eight-week program. Why do you love squatting so much?*

**DIANNA:** I just love how squatting makes my legs feel, and I get a great booty pump from it. It really has made my legs slender. I naturally have bigger thighs, but once I started doing sprints and focusing on my squats, I felt like my legs got a lot leaner than ever before.

**FRX:** *You are a full-time model and travel the world as five-time Miss Supercross. How are you able to stay on track and get shoot ready when you're always on the move?*

**DIANNA:** You have to be able to improvise. I absolutely love Mexican food, because they always have tacos with grilled chicken breast on a corn tortilla. I love sandwich shops, especially those trendy ones, because you know they have organic options. I also bring Quest Bars when I can. I'm a huge fan of the Chocolate Chip Cookie Dough flavor.

**FRX:** *What supplements did you use to help you get in shape for the shoot?*

**DIANNA:** I believe that Advanced Molecular Labs' [AML] supplements are the best. They are based on cutting-edge science and innovation [go to advancedmolecularlabs.com to learn more].

I use my AML Preworkout whenever I lift. It's the best pre-workout taste I've ever had and it gives me the right about of focus and energy. It's not a crazy overstimulated feeling—you're not like itching to get out of your skin or anything like that. I drink half of it when I am heading to the gym. Then I drink the last half as I'm working out. It really gets me through those heavy lifting sessions. I use my Thermo Heat daytime fat burner before my HIIT sessions. And I love Thermo Heat Nighttime—my whole family loves it too because it gives you such a great night's sleep. Something I can definitely use when I am on the road.

I also take the new Thermo Heat Multi advanced metabolism-enhancing multi-vitamin.

**FRX:** *You have been vocal about overcoming an eating disorder. Tell us about that journey.*

**DIANNA:** I started going to eating disorder outpatient program, so basically going to therapy a couple times a week seeing an eating disorder specialist, two months before my last Olympia. I had to learn how to love myself at any state. I wasn't even happy being thin. I had to learn how to love my body, however it looked, as long as I was being good to it, treating it respectfully and not binging or starving myself. And I had to learn to block out critics.

**“**  
**I JUST LOVE HOW SQUATTING MAKES MY LEGS FEEL, AND I GET A GREAT BOOTY PUMP FROM IT.**  
**”**



# EXAMPLE "DAY IN THE LIFE"

Dianna doesn't eat the same thing each day, but below is an example "day in the life" using her daily macronutrient targets. She maintains these targets each day, and then increases carbs once a week to 250 to 300 grams to give her metabolism a boost.



## DAILY MACRO TARGETS

155 G PROTEIN  
170 G CARBS (< 30 G SUGAR)  
65 G FAT  
1,850 ESTIMATED CALORIES

## MEAL 1 - PRE-WORKOUT

1 QUEST Bar, Chocolate Chip Cookie Dough

### Pre-Workout Supplements:

Weight Training: 1 scoop

Advanced Molecular Labs' PREWORKOUT

HIIT: AML's Thermo Heat

### During Weight Training:

1 scoop AML's PREWORKOUT

## MEAL 2 - POST-WORKOUT

Premier Protein shake

1/2 cup oatmeal

## MEAL 3

4 oz turkey breast

2 slices Dave's Killer Bread

1 tsp mustard

1 tbsp light Italian dressing

## MEAL 4

1 whole egg

1 oz skim mozzarella cheese

1 cup green veggies

## MEAL 5

Siggi's Skyr Yogurt

## MEAL 6

4 oz filet

5 oz baked potato

1 tbsp light butter

1 tbsp light sour cream

1 cup green veggies

2 Thermo Heat Multi Vitamins

### Before Bed:

2 AML's Thermo Heat

Nighttime



## NUTRITION TIPS

- Use a nutritional tracking app like MyFitnessPal.
- While flexible dieting allows you to make choices on the go, having a plan is helpful, as it's common to make poor choices when hungry or time-crunched. Consider laying out how you will divide your macronutrients for each meal or write an actual meal plan to act as a guide.
- Spread protein throughout the day to increase satiety and keep your muscles fed with essential amino acids.

## KEEP UP WITH DIANNA

FOR MORE DIANNA, CHECK OUT HER HOT STUFF COLUMN AT [FITNESSRXWOMEN.COM](http://FITNESSRXWOMEN.COM). YOU CAN ALSO FIND HER ONLINE AT [DIANNADAHLGREN.COM](http://DIANNADAHLGREN.COM), INSTAGRAM ([@DIANNAJDAHLGREN](#)), TWITTER (@DIANNAJDAHLGREN) AND FACEBOOK.

### References:

1. Bryner RW, et al. Effects of resistance vs. aerobic training combined with an 800 calorie liquid diet on lean body mass and resting metabolic rate. *J Am Coll Nutr.* 1999 Apr;18(2):115-21
2. Hazell TJ, Olver TD, Hamilton CD et al. Two Minutes of Sprint-Interval Exercise Elicits 24-hr Oxygen Consumption Similar to That of 30 min of Continuous Endurance Exercise. *International Journal Sports Nutrition Exercise Metabolism.* 22: 276-283, 2012
3. Hamlyn N, Behm DG and Young WB. Trunk muscle activation during dynamic weight-training exercises and isometric instability activities. *J Strength Cond Res* 2007; 21, 1108-1112.



**FRX:** What would people be surprised to learn about you?

**DIANNA:** I'm very old school. A late night for us is 10:00 p.m. I don't party ever, I'm not drinker, never have been, not even in my early 20s.

**FRX:** What would you like your fitness legacy to be?

**DIANNA:** I would like everyone to know that I struggled with my fitness a lot, but I was able to overcome and still love lifting, training and eating healthy.

# Release Your INNER WARRIOR



Tips and Self-Defense Advice from “Vikings” Star

**KATHERYN WINNICK**

BY LISA STEUER

PHOTOGRAPHY BY STEPHEN BUSKEN

Katheryn Winnick is tough—both on the screen and off. The Canadian-born star plays Lagertha in the History Channel saga “Vikings” (season three premiered February 19). It’s a physically demanding role—and not only is Katheryn a skilled actress, she also does her own stunts. She holds a third-degree black belt in tae kwon do and a second-degree black belt in karate (in fact, Katheryn opened her own tae kwon do schools in her teens). She’s taught self-defense to her fellow cast members, and she’s in the process of opening up her new business—Win Kai Self-Defense.

When we spoke to Katheryn, she was in Ireland filming the third season of “Vikings” and getting ready to film the movie “Geostorm” with Gerard Butler, which is slated to come out next year. Read on for Katheryn’s diet, training and self-defense tips—and release your inner warrior!

**FRX: First off, tell us a little bit about how you got into martial arts yourself when you were younger.**

**KATHERYN:** I started at the age of 7 and it was more of a family activity ... And at that time, I was really heavily involved in gymnastics, but I fell in love with kicking and having certain goals ... So I started off at the age of 7 and fell in love with it.

**FRX: You also had your own schools as you got older.**

**KATHERYN:** Yeah, I started my first tae kwon do school at the age of 16 and I started teaching families around Toronto, more of a community service, and then it just grew and grew. By the time I was 21, I had three different schools running in Toronto. And at the same time, I was getting my degree at York University in kinesiology and health sciences. ... But I loved it. I wouldn’t trade it for anything. It was a great way to stay focused and it taught me how hard work really paid off in the end.

**FRX: What kind of influence did martial arts have on your life, especially getting into it at such a young age?**

**KATHERYN:** One, it gave me a lot of confidence. I felt empowered knowing that I could defend myself and I had a way of setting my own personal goals in ... doing a certain number of sit-ups, like trying to get 100 today or getting your kick to be even higher—so I was able to set personal goals, which was really good for me as a child. And it taught me to not only train my body physically, but also the mental endurance and the focus you need to get good at something.

And as I got older in my teen years, I was going to the gym for hours a day instead of going out and partying. It gave me a sense of purpose and definitely taught me the work ethic ... and that’s something that I actually feel now ... I know the definition of hard work—if you want anything, you have to really work hard for it.

Perseverance will get you far. Even if you don’t reach the top, you’ll get pretty close if you just keep trying to reach it. The lessons are invaluable, and I’m really grateful for my parents for getting me involved at a young age and to be able to have that now as an adult. »





Katheryn's Trainer: PAUL KARAMI  
Styling: JACKIE ATKINS  
Hair: STEVEN MASON  
Make-up: KINDRA MANN  
Art Direction: CHRIS HOBRECKER  
Green bra and black tank: LULULEMON  
Katheryn's Pants: BODY LANGUAGE

# FitRx FEATURE

## FRX: What are some misconceptions about martial arts training?

**KATHERYN:** There are lots of things, especially being a woman. Those macho guys are like, 'Oh yeah, I train as hard as you can, and I can get you!' And going out, that was something I had to face pretty much daily. But what it did teach me was that knowledge was more powerful than necessarily the physical blow. If you know where to kick somebody ... where the pressure points or how the joints work, you'll be able to get out of the situation. ... I teach women self-defense and that's a big part of it not just physically, but also to have the strength mentally and also verbally to be able to get your point across.

Another misconception is that a lot of people feel that if you do martial arts, you'll get very aggressive and you'll be starting fights. If anything, the opposite is true. An old master ... said to me, you don't really start training martial arts until you get to your black belt. Then you can actually say that you've trained martial arts. Before, it's really the grade school work ... I used to teach a lot of young boys and teenage guys that would get into fights a lot. I found that the more training that they did and the more respect that they had for themselves, that they didn't need to start a fight- that they could just walk away. That was really nice to see. They know that they could use it if push comes to shove. They didn't let their egos get the best of them.

## FRX: Do you think that it's something that anyone can learn?

**KATHERYN:** I really feel that you can transform a woman in eight hours. And it's not teaching them a lot in terms of martial arts, it's teaching them key basic, very simple moves that we train under stress simulation drills so it gets programmed into your muscle memory, and that's what's important. You're not thinking when you get attacked, but you just react.

## FRX: And you taught self-defense to the crew on "Vikings," correct?

**KATHERYN:** I taught self-defense to the women on "Vikings," and the background actors and the crew and the people who work in the office, and we had a huge turnout. And I was just on set yesterday and one of the other women said, "Can we do it again?" ... I love to see women transform, and I think every woman needs to learn that and to have the confidence that they can defend themselves. ... It is something I feel every woman can do no matter your age, no matter your physical ability. ... It's a necessity.

## FRX: Obviously, your role as Lagertha in "Vikings" is very physically demanding. How do you train to prepare?

**KATHERYN:** When I'm off-season, I do my own self-defense training and kicking and learning a little bit of weaponry. It's important for me just to stay active and I try to get outside for an hour a day. ... And it varies. I'm more of an outdoor person who enjoys being outside or kicking and doing something active. I tend to get bored if I'm in the gym and doing weights, so I do like to switch it up. So here, being on set, it's training or horseback riding, running or hiking in the beautiful mountains. Right now I'm doing stairs. I do stairs up and down. There are about 250 steps on one set of stairs from an old castle that I found, in a small heritage village. I've been

running  
that  
every  
morning.

## FRX: Have you experienced any injuries on set?

**KATHERYN:** Of course, I've had my nose broken a few times. ... I've pulled many muscles. I've never dislocated my shoulder, but I have dislocated other people's shoulders. It's a very physical show.

## FRX: And you also do all your own stunts, is that correct?

**KATHERYN:** Yes. I love it. authenticity of the character and I enjoy it.

I feel that it keeps the and I feel I can do it well

## FRX: You grew up doing martial arts and now you have a career that allows you to utilize that. That must be really rewarding to you.

**KATHERYN:** I really pinch myself sometimes ... how lucky I am. I incorporate both my loves. The physical, being a strong woman but also a character that I love to play. She's not just strong physically- she's strong willed.

## FRX: What's really great about the show is that the women are fighting right alongside the men. And it's a very female empowering role and that also has to be really great. Do you see yourself as a positive role model in that respect?

**KATHERYN:** I'm not necessarily conscious of it. It's nice to see that a lot of women are relating to Lagertha and I feel blessed ... I play a real character that did fight alongside men, and women had to do everything. ... They also had to be a mother, take care of the farm, they had a say in the political sides of things of how to run a community. It's really nice to be on a show that embraces all sides of who women were.

## FRX: Season three of 'Vikings' premiered on February 19. What can viewers expect this season?

**KATHERYN:** Yeah it's just even more epic. We have incredible storylines- we are invading Paris, we have some exciting cast members that are joining us this year. It's really exciting. The show is just so rich and so full in so many different ways, from plot lines to set designs to the culture of being a Viking and even invading different cities like Paris. It's just such a unique show and I'm very proud of it. And specifically to play a woman character like Lagertha. ... I feel that there needs to be more strong written characters out there on television for women- that also celebrate femininity and not put them in the category of "you can be strong, but you can't be feminine."



## WARRIOR TRAINING

Katherlyn works with a weapons trainer when she's not filming and tries to be active for at least an hour a day. "And it's important to do resistance training as well," she said. "I've been working on isometric moves, so it's not big range of motion, but really holding and working on core strength— for example planks or holding a weight up and really isolating those muscles to really tone."

When asked about advice for busy women who want to stay fit, Katherlyn said often it takes 28 days to create a habit. "I think that if you can get to that number and force yourself and motivate yourself to do that, then eventually your body's going to crave it and you're going to need it, and it won't be as hard as it is the first 28 days."

She added that it's a good idea to figure out how to add exercise to your day-to-day life and little things can make a difference— take the stairs instead of the elevator, and do core work at your desk. "A girlfriend of mine has a kid and she doesn't have time to go to her yoga class, so she [bounces] her toddler up and down and works on her arms, and he has fun playing. So I think you just need to figure out ways of squeezing in your exercise every day."

## KATHERYN'S SIMPLE SELF-DEFENSE TIPS

- Know your surroundings.
- Walk with purpose. A lot of attackers pick out the woman they're going to attack based on the gait of their walk. So, especially late at night, always walk with your head held high and your shoulders back and confident.
- Always walk with your keys already in your hand when you are walking to your door or car— that way you can quickly get in if someone approaches you.
- If you don't have pepper spray, carry hairspray or dog repellent in your bag.
- Know where to kick. A lot of people think that kicking an attacker "where it hurts" will do the trick, but this is not always the case because with premeditated attacks, the culprit may be wearing something to protect themselves. If you are being attacked, it's a better idea to try hitting back at your attacker's other vulnerable areas: the back of the foot or nose, for instance. "The philosophy is not to teach women how to fight, but really to [teach them how] to get out of a sticky situation, [so they can] get that blow and get away," said Katherlyn. "So I think that that's important, to always be aware that it can happen at any time."

## EAT LIKE A VIKING

Katherlyn has celiac disease, so her diet is gluten free. But she also just believes that it is a healthier way to live. "I do strongly feel that it is a healthier way for the body to digest," said Katherlyn. "If we just eat how our ancestors lived by living off the land [with] fresh fruits, vegetables, nuts, berries, fish and proteins ... that's definitely a healthier way."

Katherlyn goes heavy on the vegetables and said she follows something similar to the Zone Diet— paying attention to include protein, carbs and fats. "I love greens, kale salads, Brussel sprouts salads [with] roasted pine nuts," she said. "Hummus is a great snack to have with a hard-boiled egg."

Since she is often traveling, Katherlyn tries to always make sure she has a healthy snack in her purse, like a gluten-free protein bar, and makes sure to drink eight to 10 glasses of water a day. In addition, Katherlyn loves to juice. "I find it's better than coffee," she said. "It's something I try to do on set just to keep the energy up as well." A detox green juice that she often has in the morning includes half an avocado, kale, cucumber, wheat grass and an apple.

"It's absolutely delicious and with the avocado it's so creamy," said Katherlyn. "I look forward to it. Usually that, and a couple hard-boiled eggs for my protein, and that's enough. That would be a great little breakfast if I'm on the go." ■

*Be on the lookout for Katherlyn's new self-defense program, Win Kai Self-Defense, and catch Katherlyn in 'Vikings' every Thursday on the History Channel at 10/9 central.*



# HAM IT UP

## ***Glutes get all the attention these days.***

However, nothing complements your backside like tight, sculpted hamstrings. Besides being a synergist to many glute movements, shapely hamstrings add sexy curve to one's profile and are the perfect accessory for your skinny jeans, shorty shorts, leggings and bikinis. Even more important than appearance, well-trained hamstrings are critical to injury prevention, especially with athletes.

In fact, hamstring injuries are one of the most common in sports. And, you don't have to suit up for a match or game to be at risk. Hamstring injuries typically occur during running and sprinting, especially with fast bursts and quick stops. Since we know you are incorporating HIIT sprints regularly into your training, hamstring strength and conditioning are essential for keeping you out of the doctor's office, in the gym and on track to your goals.

I know what you're thinking, "I already train hamstrings." The question is whether you train them enough, as one of the key causes of hamstring injuries is muscle imbalances. For example, typical leg workouts emphasize the quads and when the front of the thigh is more developed than the back, hamstrings are at risk for injury. And, once you have a hamstring injury, some research indicates that the recurrence rate is close to two times higher than that of other injuries.<sup>1</sup>

What's a fit gal to do? Consider adding more volume to your hamstring training with our HAM IT UP Program featuring Ashley Kaltwasser. An 11-time IFBB Bikini Champion and former Division 1 track athlete, Ashley knows all about the functional and aesthetic importance of hamstrings. To help get our legs in top form, Ashley shares her favorite hamstring exercises and top training tips. Ready, set, *Go HAM!*

# UP

*Shape sexy,  
strong legs  
ready for  
summer or  
sport!*

*With 2x IFBB Bikini Olympia  
Champion Ashley Kaltwasser*

By JAIME BAIRD

Photography by Gregory James

Hair, Makeup, Styling by Jessica Colley  
Pink and Black outfit: Better Bodies, Footwear: New Balance

Location: Summer's Fitness in Canton Ohio

Blue and yellow outfit:  
Champion C9 sports bra and Reebok shorts.

Location: Gold's Gym Henderson, NV



# Get To Know Ashley K.

We caught up with Ashley to chat hamstrings, the "perfect" bikini body and her best advice for getting fit...

**FITRX:** Have you always had great hamstrings?

**ASHLEY:** For as long as I can remember, I have had good hammies. I attribute this to my lengthy sprinting background. I was a very hamstring-dominant runner. I did not have ideal form when I sprinted. I leaned too far forward and kicked back. My track coaches throughout the years tried to fix this habit of mine, but it never worked. To this day, I think my "bad" form is what shaped my hamstrings and glutes! Maybe it was a blessing in disguise?

**FITRX:** What's your favorite hamstring exercise?

**ASHLEY:** I like the bench dumbbell hamstring curl. I feel like this hits deep in the hamstring, which can be tricky to target. This exercise also provides a great stretch. For gyms with limited equipment, this is perfect, as all you need is a bench and a dumbbell.

**FITRX:** You have had an extremely successful 2014 as an IFBB Bikini Pro. What accomplishments are you most proud of?

**ASHLEY:** I am very proud of the fact that I am the first-ever repeat Bikini Olympia champion. I also hold the record for the most IFBB Pro Bikini

wins with 11 victories. I never thought I would be where I am today. I worked so hard, and not only did I accomplish my goals, I exceeded them. That is truly the best feeling in the world.

**FITRX:** Did you experience any challenges in 2014 that helped you grow as an athlete or person?

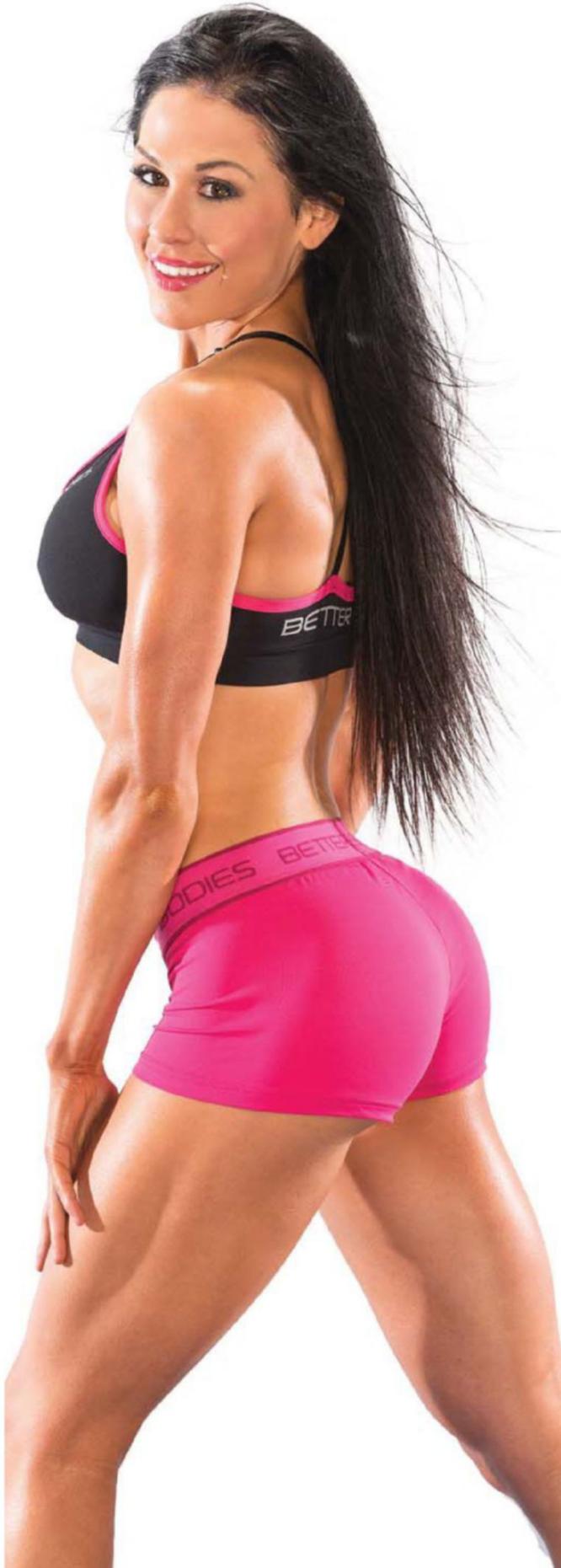
**ASHLEY:** I traveled a lot in 2014. I visited nine different countries that year. Traveling was new to me. In fact, before I started competing in the IFBB, I'd only been on a plane once in my life and I was never out of the country. It was a challenge adapting to different time zones and figuring out ways to keep my diet on track while out of the country.

**FITRX:** You are gearing up for the 2015 Bikini International where you are the defending champion. What improvements are you working on this prep?

**ASHLEY:** The thing that I struggle with the most is my stage presentation. Even after all of the shows I competed in and have won, I STILL get nervous just like everyone else! It's OK to be a little nervous, because it shows that you are passionate and care about how you perform, but I tend to get overly anxious and shaky, which throws off my presentation sometimes. I have been getting more comfortable onstage lately, though! I have been practicing my presentation like crazy to ensure that my routine is smooth.

**FITRX:** What are your goals for 2015?

**ASHLEY:** I would love to take home the Arnold Bikini International title for the second time. I live in Ohio [where the show occurs], was born here, and have been attending the Arnold Sports Festival even before I started competing. So, this show is very near and dear to my heart. I would also like to travel to new countries and



continue to be an ambassador for the sport.

**FITRX:** You are currently the No. 1 Bikini body in the world and considered "perfect" by many. Do you feel that there is such a thing as a "perfect body"?

**ASHLEY:** I do not think the perfect body exists. We are all human, which means we all have flaws. I know I certainly have body parts that I would like to improve, such as my arms! That is the fun part of this sport and fitness in general—chasing an improved physique!

**FITRX:** Do you have a favorite motivational quote?

**ASHLEY:** "Never underestimate the power of a great attitude."

The mind is a powerful thing. Sometimes all you need is a mental push to accomplish great things.

**FITRX:** If you could impart one piece of advice to women working to get in shape like you, what would it be?

**ASHLEY:** Be consistent—quality, lasting results take time. Also, don't necessarily train/diet harder... do it SMARTER. Make the most of your training by making it more efficient. Don't feel pressured to copy someone else's diet or training regimen; they are not you. Everyone is different, which means everyone's needs are different.

## WORKOUT 1:

ROMANIAN DEADLIFT 5 X 10 REPS

BENCH DUMBBELL HAMSTRING CURL 4 X 15 REPS

GOOD MORNING 4 X 12 REPS

SINGLE-LEG STABILITY BALL CURL 4 X 15 REPS, EACH LEG

## WORKOUT 2:

GLUTE-HAM RAISE 5 X 8 REPS (OR UNTIL FAILURE)

HAMSTRING CURL MACHINE 4 X 12 REPS

CABLE PULL-THROUGH 4 X 12 REPS

DUMBBELL SINGLE-LEG DEADLIFT 4 X 10 REPS, EACH LEG

# THE WORKOUTS

- To bring up lagging or weak hamstrings, perform both workouts each week, with at least three days separating the training days. Train quads separately.

- To just add more focus to your hamstrings, consider splitting up your quad and hamstring training into separate days. Choose one of the workouts for the hamstring day.

- If only training legs once per week, consider adding a few quad-focused (i.e., leg extensions) or compound lower body exercises (i.e., squats, lunges) to one of our workouts.



## GET IT RIGHT

### GLUTE-HAM RAISE

This exercise can be performed with a partner holding your ankles or by securing your ankles under a piece of equipment. If performing from the floor, consider folding up a towel or a mat and place under your knees. Descend to floor, keeping your body from head to knees in a straight line. Engage your hamstrings and glutes to control the movement. When you reach the floor, land on your hands. Lightly press off your hands to help you return to the upright position.

ASHLEY'S TIP: "THE LESS YOU PUSH OFF THE FLOOR, THE MORE YOU RELY ON YOUR HAMSTRINGS TO DO THE WORK." »



# FitRx TRAINING



## ROMANIAN DEADLIFT

Begin standing with feet about shoulder width. With a slight bend in the knee and a straight back, push your glutes backwards and hinge at the hips to lower your body down to grasp the bar just outside your legs. Look straight ahead as you drive your hips forward to lift the barbell. Squeeze your glutes at the top of the movement, then slowly lower the barbell back to the floor, keeping the weight close to your shins. The further the weight is from your legs, the more you will feel this in your lower back.



## BENCH DUMBBELL HAMSTRING CURL

Lying facedown on the bench, position a dumbbell between feet. Grab the bench to stabilize the upper body and core. Curl dumbbell by contracting hamstring. Slowly lower the dumbbell back down to the starting position.

ASHLEY'S TIP: "MAKE SURE YOUR FEET ARE FUSED TOGETHER TIGHTLY SO YOU DON'T DROP THE WEIGHT."



**HAMSTRINGS GIVE  
THE LEGS MORE  
SHAPE AND CURVE.**

### HAMSTRING CURL MACHINE

Using a single-leg or traditional curl machine, keep your hips pressed firmly against the pad and bend your knee(s) slowly to bring the weight toward your glutes. Hold for two seconds and slowly lower to starting position.



## Train Like A Champ

TO DEVELOP GREAT HAMSTRINGS, IFBB BIKINI CHAMPION ASHLEY KALTWASSER OFFERS THESE TIPS...

**TRAIN YOUR BRAIN.** MAKE SURE THAT YOU ARE MAKING A GOOD MIND-BODY CONNECTION IN YOUR TRAINING. DON'T JUST GO THROUGH THE MOVEMENTS— REALLY THINK ABOUT THE MUSCLE THAT YOU ARE USING. TAKING A FEW SECONDS TO PAUSE AND SQUEEZE WHEN YOU CONTRACT IS BENEFICIAL.

**EAT FOR ENERGY.** MAKE SURE YOU ARE INGESTING SUFFICIENT CARBOHYDRATES AND PROTEIN PRE- AND POST-WORKOUT TO FUEL YOUR TRAINING AND JUMPSTART RECOVERY. IN ADDITION, AVOID EMPTY CALORIES NOT REINFORCING YOUR TRAINING GOALS, AS THESE ARE LIKELY TO BE STORED AS BODY FAT.

**FOCUS ON FORM.** DO NOT SACRIFICE GOOD FORM JUST TO LIFT HEAVIER, AS THIS CAN LEAD TO INJURY. INSTEAD, KEEP STRICT FORM AND CHALLENGE YOUR MUSCLES BY INCREASING REPS, CHANGING THE REP TEMPO, EXPERIMENTING WITH DROP SETS, USING A SPOTTER FOR HEAVIER WEIGHTS AND/OR USING OTHER INTENSITY TECHNIQUES. OVER TIME, YOU WILL BUILD ENOUGH STRENGTH TO LIFT HEAVIER WHILE MAINTAINING FORM.

**STRETCH.** MAKE SURE THAT YOUR HAMSTRINGS ARE SUFFICIENTLY WARMED UP. PERFORM DYNAMIC MOVEMENTS PRIOR TO TRAINING TO ENSURE YOUR HAMSTRINGS ARE ACTIVATED AND HAVE OPTIMAL RANGE OF MOTION, AND BE SURE TO STRETCH POST-WORKOUT. POOR FLEXIBILITY WILL NOT ONLY NEGATIVELY IMPACT RANGE OF MOTION, IT IS ALSO A CONTRIBUTOR TO HAMSTRING INJURY.



ASHLEY'S TIP: "DON'T LET THE HIPS DROP AND TRY TO KEEP THE WORKING LEG FROM TURNING IN AND OUT. THE STRAIGHTER THE LINE, THE MORE YOU ARE TARGETING THE HAMSTRINGS."

### SINGLE-LEG STABILITY BALL CURL

Lying on the floor in a supine position, place your heels on top of a medium-sized exercise ball. Lift hips up as high as you can, keeping all weight on the upper back and shoulders. Keeping hips up, lift one leg straight up in the air and curl the heel positioned on the ball to your butt and then extend your legs back to the starting position. »

## GOOD MORNING

To feel this exercise in your rear rather than your lower back, think of pushing your hips/glutes back rather than bending your body forward as you descend into movement. Remember to keep your weight in your heels, a slight bend in your knees and tension in the hamstrings and glutes throughout the exercise.

ASHLEY'S TIP: "MAKE SURE THAT YOU ARE NOT HUNCHING OVER AND DON'T LOWER BEYOND 90 DEGREES."



“

**THE MIND IS A POWERFUL THING- SOMETIMES ALL YOU NEED IS A MENTAL PUSH TO ACCOMPLISH GREAT THINGS.”**

”



### CABLE PULL-THROUGH

Attach a rope to the low pulley of the cable machine. Grab an end of the rope in each hand and stand facing away from the stack. With your weight in your heels and knees slightly bent, hinge at the hips to lower down until your torso is about 45 degrees to the floor. Finish the rep by thrusting your hips forward and squeezing your glutes.

ASHLEY'S TIP: "ONCE AGAIN, MAKE SURE THAT YOU MAINTAIN A STRAIGHT BACK—NO HUNCHING FORWARD."



### DUMBBELL SINGLE-LEG DEADLIFT

Holding a dumbbell in the right hand at your side, bend your left knee slightly and lift the right leg off the floor a few inches. Once you have your balance, move your hips backward to initiate the movement and reach the dumbbell toward the left leg while allowing the right leg to lift behind you like a pendulum. Keeping your weight in your heel, rise back up using your hamstrings. »

ASHLEY'S TIP: "MOVE IN A SLOW AND CONTROLLED MOTION TO EFFECTIVELY AND SAFELY COMPLETE THE MOVEMENT."

# KEEP IT FRESH

**ASHLEY'S KEEP IT FRESH COLUMN ON FITNESSRXWOMEN.COM OFFERS TIPS TO HELP KEEP YOUR NUTRITION AND TRAINING FUN AND FLAVORFUL. HERE ARE A FEW OF HER SUGGESTIONS...**

**FLAVOR UP.** DIETING DOES NOT HAVE TO BE BORING! DON'T BE AFRAID TO FLAVOR YOUR FOODS WITH SEASONINGS AND LOW-CALORIE CONDIMENTS. ALSO, DON'T EAT THE SAME THING DAY IN AND DAY OUT. MAKE YOUR FOOD CHOICES COLORFUL AND EXCITING. VARIETY IS THE SPICE OF LIFE!

**RESTAURANT ADVENTURE.** ALLOW YOURSELF A TREAT MEAL EVERY WEEK TO HELP CONQUER ANY CRAVINGS THAT YOU MAY HAVE HAD DURING THE WEEK AND GIVE YOURSELF A BREAK FROM YOUR TYPICAL CLEAN EATS. I LIKE TO VISIT A DIFFERENT RESTAURANT EACH WEEK TO GIVE MYSELF NEW, FUN EXPERIENCES.

**FUN FOODS.** WE ARE SO SPOILED THESE DAYS WITH SO MANY DIET-FRIENDLY, DELICIOUS FOOD PRODUCTS THAT ARE AVAILABLE TO US. FOR EXAMPLE, I USE MUSCLEEGG FLAVORED EGG WHITES EVERYDAY! I HATED THE TASTE OF PLAIN EGGS, SO I SWITCHED TO THIS PRODUCT AND LOVE IT. YOU CAN ORDER AT [WWW.MUSCLEEGG.COM](http://WWW.MUSCLEEGG.COM).

**SWITCH IT UP.** WHILE IT IS GOOD TO KEEP SOME FUNDAMENTAL MOVES IN OUR TRAINING, EXPERIMENTING WITH NEW EXERCISES AND APPROACHES WILL KEEP YOUR MIND ENGAGED AND BODY GUESSING AND PROGRESSING. FEEL IN A MAJOR RUT? CONSIDER CHANGING YOUR ENVIRONMENT BY PURCHASING A TWO-WEEK PASS TO ANOTHER GYM AND/OR JOIN A FEW GROUP TRAINING CLASSES THAT YOU'VE NEVER TRIED BEFORE, SUCH AS YOGA, TRX, PILATES OR A BOOT CAMP! ■

## ABOUT ASHLEY KALTWASSER

2013, 2014 IFBB Bikini Olympia Champion

2014 IFBB Bikini International Champion

Gaspari Nutrition, Better Bodies & MuscleEgg Athlete

Resides in Akron, Ohio

Former Division 1 Collegiate Track Athlete

## KEEP UP WITH ASHLEY

Check out Ashley's "Keep it Fresh" column at [FitnessRxWomen.com](http://FitnessRxWomen.com) for her fun and flavorful fit living tips. You can also find her on Facebook ([www.facebook.com/BikiniProAshley](http://www.facebook.com/BikiniProAshley)), Twitter (@AshleyKFit) and Instagram (AshleyKfit). Ashley can be contacted for appearances through [www.fmg-fitnessmanagementgroup.com](http://www.fmg-fitnessmanagementgroup.com).

## ASHLEY'S ULTIMATE FAT-BURNING STACK

- GASPARI'S CARNIPURE FOR FAT LOSS AND RECOVERY
- GASPARI'S DETONATE XT TO PROVIDE THE ENERGY FOR HER MORNING CARDIO
- GASPARI SUPERPUMP 3.0
- GASPARI AMINOLAST
- GASPARI ISOFUSION

For more information, visit [www.gasparinutrition.com](http://www.gasparinutrition.com).

## REFERENCES

1. Liu, H., Garrett, W., Moorman, C. Yu, B. Injury rate, mechanism, and risk factors of hamstring strain injuries in sports: A review of the literature. *Journal of Sport and Health Science* 1(2): 92-101, 2012
2. McAllister, MJ, Hammond, KG, Schilling, BK, Ferreria, LC, Reed, JP, and Weiss, LW. Muscle activation during various hamstring exercises. *J Strength Cond Res* 28(6): 1573-1580, 2014  
[http://journals.lww.com/nsca-jscr/Citation/2014/06000/Muscle\\_Activation\\_During\\_Various\\_Hamstring.11.aspx](http://journals.lww.com/nsca-jscr/Citation/2014/06000/Muscle_Activation_During_Various_Hamstring.11.aspx)
3. Vigotsky AD, Harper EN, Ryan DR, Contreras B. (2015) Effects of load on good morning kinematics and EMG activity. *PeerJ* 2:e708 <http://dx.doi.org/10.7717/peerj.708>



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- ✓ No pea protein
- ✓ Great taste



#NATURESFOOD

# SHOW ON!



Styling by Trish Stella  
Hair, Makeup, by Jessica Colley  
Clothing and footwear: Nike  
Location: Gold's Gym Henderson, NV

# SHOULDER

## SCULPT YOUR UPPER BODY FOR SUMMER WITH IFBB PRO CANDICE KEENE

By Lisa Steuer

Photography by Gregory James

*Achieving broad and sculpted shoulders takes consistency, dedication and the right exercises to hit the upper body from all angles.* And while many women desire those toned shoulders that perfectly complement spring and summer clothing, many have trouble getting there. But it IS possible! You see, it all comes down to this—even when training gets tough, you've got to SHOULDER ON!

To help us achieve this goal, IFBB Figure Pro Candice Keene is the perfect inspiration. Candice is a Figure International champion and a true training expert who knows exactly what it takes. Here she demonstrates an upper body-sculpting workout that includes some less-than-traditional exercises to help you change things up in order to see results. Not only will you rock your short sleeves when the warmer weather hits, but also having a set of beautiful, toned shoulders can make your waist appear smaller, giving your physique a more balanced shape.

So come on, ladies— it's time to SHOULDER ON!

# CHATTING WITH CANDICE

*When we spoke with Candice, she was eight weeks out from her fifth consecutive Figure International and hoping to take her third title. We asked her a few questions about diet staples, motivation and more! Here's what Candice had to say.*

#### FRX: WHY DO YOU ENJOY FITNESS AND COMPETING SO MUCH?

**CANDICE:** I absolutely love the structure of competing. I love the challenge of it. The obstacles make me stronger. Each show and each year I strive to be a better version of myself, both physically and mentally. You grow so much as a person through fitness and competing. [Us competitors] all know what it takes to set that goal and to push each and every day towards that goal. We all appreciate that of the sport and of each other. As long as my body and mind allow me to, fitness and competing will always be with me.



#### FRX: DO YOU EVER HAVE DAYS WHERE YOU JUST DON'T WANT TO TRAIN?

#### HOW DO YOU MOTIVATE YOURSELF?

**CANDICE:** Oh boy, of course I do! And I will admit, I see more of those days than I did in the beginning of my Figure career. I am human— I get tired, I get frustrated, and, yes, my motivation escapes me some days. But that's when I put myself in check! I remind myself of my goal, and how far I have come. We all will have our rough days, and that's OK. It's how you bounce out of it that matters.

#### FRX: HOW OFTEN DO YOU HAVE CHEAT MEALS, AND WHAT'S YOUR FAVORITE?

**CANDICE:** For me, it depends how far along in my prep I am. If I'm ahead of the game, I will add one in each week. For the Olympia I was allowed burger and fries the last five weeks. It was glorious! So yep, for me, a nice big juicy burger and fries and I'm content!

#### FRX: WHAT ARE SOME STAPLES OF YOUR DIET?

**CANDICE:** During prep, I eat mostly chicken and cod as well as eggs for my protein source. I like to opt for free-range chicken, wild cod and free-range eggs as well. I like to do organic produce and rather than eating oats, I eat cream of rice. For protein powder, I like plant protein. NovaForme's PhytoPro-V is my favorite. I did all of this for the Olympia [where Candice placed second] the last six weeks of prep (because I was feeling very sluggish and had a lot of inflammation), and, boy, did I notice a difference in how I felt and how my body looked as well! It's amazing how the little tweaks we implement in our diet can make a big change.

#### FRX: GOING INTO THE ARNOLD THIS YEAR TO DEFEND YOUR TITLE, HAVE YOU MADE ANY CHANGES TO YOUR PREP APPROACH?

**CANDICE:** My prep for the 2014 Olympia I thought was my most challenging. During the summer, I started experiencing pretty bad instability with my hips, lumbar and lower thoracic. I added in different therapies and muscled my way to the end. The month after the Olympia, everything (mostly back) just started radiating with inflammation, in addition to my previous issues. So I decided to get an X-ray and MRI. I had several issues come up, and am now seeing several different therapists to correct instability and imbalances. So for this year's Arnold prep, I am changing a lot of my approach to training ... especially lower body and how I am performing my exercises and focus on the right exercises for my body. To maintain and enhance structural integrity had been my focus this prep. It is very frustrating at times and for me, this show will be my most challenging, but more mentally. But at the same time, it will be my most rewarding as well.

#### FRX: TELL US A LITTLE BIT ABOUT PROCAKEZ. LAST TIME WE TALKED, YOU SAID YOUR NEXT VENTURE WAS TO BRING THEM TO THE MASSES. WHERE ARE YOU CURRENTLY AT WITH THAT GOAL?

**CANDICE:** My vision is still that indeed. When I came up with ProCakez, it was something I stumbled upon when experimenting in the kitchen while in prep in 2009. The "hustle" was going strong for the first few years, then I slowly started putting them on the back burner (with my end goal for them still intact). I was balancing full-time semesters, averaging six shows a year, and making/selling on average 75 cakes a week, sometimes more. I still make them for requests, though. And

# THE WORKOUT

This is one of Candice's all-time favorite shoulder workouts. "It works all the shoulder muscles effectively. I like doing this workout every few weeks to change it up. Because these particular movements are a little different than traditional ones, it shocks the body a bit and it keeps it fun!" she said.

## WARM-UP

### DUMBBELL MILITARY PRESS

1 WARM-UP SET FOR 20 REPS

3-4 WORKING SETS X 10-12 REPS

### DUMBBELL UPRIGHT ROW

3 X 10-12 REPS

### REVERSE-GRIP BARBELL PRESS

3 X 10-12 REPS

### COMBINATION MOVE:

#### PRONE INCLINE BENCH DUMBBELL RAISE RIGHT INTO

#### PRONE INCLINE BENCH REAR LATERAL RAISE

3 X 15 REPS

### STAGGERED STANCE CABLE LEANING LATERAL RAISE

4 SETS, INCREASING WEIGHT EACH SET; 15/10/12/8 REPS

### REAR DELT REVERSE CABLE FLYE

3 X 12-15 REPS

### CABLE ROPE HIGH PULLS (STANDING)

3-4 X 10-12 REPS

### STEP-UPS WITH HANDS

COUNT TO 20-30, DEPENDING HOW SOON SHOULDERS FATIGUE (MAKING 10-15 PER SIDE), 3 SETS

### FOREARMS TO HANDS ON BOSU BALL

COUNT TO 20-30, DEPENDING HOW SOON SHOULDERS FATIGUE (MAKING 10-15 PER SIDE), 3 SETS

since ProCakez is my "baby" I felt right now is the time. My focus is back to ProCakez, so it's time for me to really focus on getting them to market.

### FRX: WHAT ADVICE DO YOU HAVE FOR WOMEN WHO WANT TO GET IN SHAPE LIKE YOU?

**CANDICE:** Have a plan. Write it on paper. Map out that plan into action steps and write your goal above your action steps. When you see it in a visual perspective, it will appear much more clear and obtainable. Also, the act of writing it on paper is very powerful. Without a doubt, it means you will achieve it! The secret, though, is this— you must believe in yourself.

### FRX: IS THERE ANYTHING ELSE YOU'D LIKE TO ADD?

**CANDICE:** Don't rush things. Be patient. Everything will come together like magic. During your journey to getting fit, one piece of advice that is priceless is to enjoy your journey! Every part of it! Yes, the destination (the end result aka your goal) is obviously rewarding, but the journey along the way is where it's at. Embrace each experience, each up and down, all the knowledge you will learn, definitely all the people you meet and friendships you make, and the person you will become. »



## ▼GET IT RIGHT

### HOW TO PERFORM THE EXERCISES IN THIS WORKOUT



#### DUMBBELL MILITARY PRESS

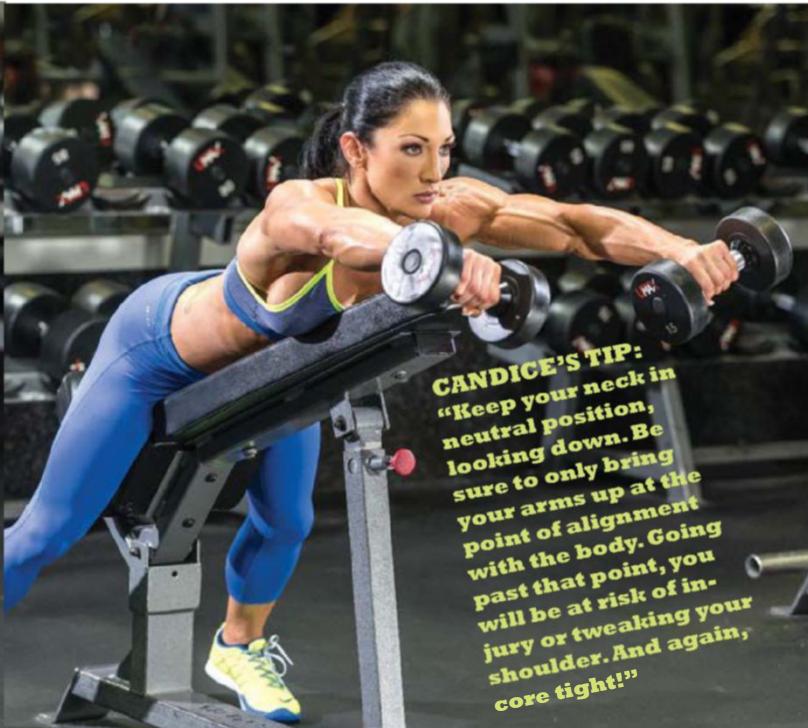
Begin seated on bench, and hold two dumbbells at your shoulders with your palms facing forward. Press the dumbbells above your head, and lower back to starting position.

**CANDICE'S TIP:**  
"Keep your core nice and tight to protect your spine and keep stable. Also, don't bring the dumbbells together all the way at the top. By doing this, it creates more time under tension."

**“WE ALL WILL HAVE OUR ROUGH DAYS, AND THAT'S OK. IT'S HOW YOU BOUNCE OUT OF IT THAT MATTERS.”**

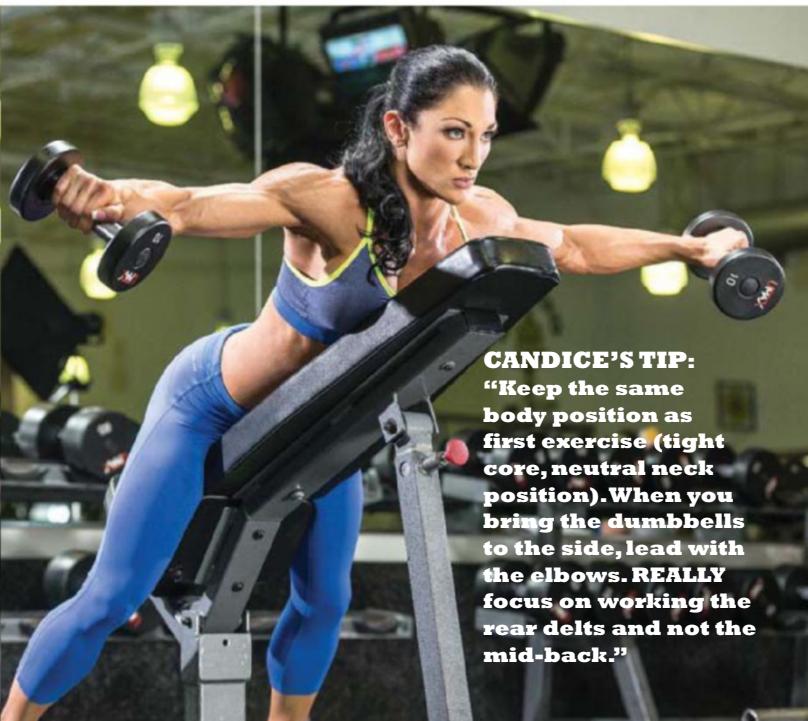
### PRONE INCLINE BENCH DUMBBELL RAISE

Hold a dumbbell in each hand and lie facedown on an incline bench. Slowly raise the dumbbells in front of you, and keep your elbows locked. Squeeze at the top and breathe out. Lower arms back down to your starting position and inhale.



### PRONE INCLINE BENCH REAR LATERAL RAISE

After performing the dumbbell raise, raise your arms to the side until your elbows are shoulder height and palms are facing the floor. Keep your elbows slightly bent. Return to the starting position.



# KEYS TO BUILDING SHOULDERS

## CANDICE SHARES HER TOP TIPS.

- SLOW AND CONTROLLED MOVEMENTS (NO MOMENTUM/ASSISTANCE FROM THE BODY).
- FOCUS ON THE WHOLE SHOULDER ANATOMY. "INCORPORATE A VARIETY OF DIFFERENT DELT RAISES, HITTING DIFFERENT ANGLES."
- WARM UP PROPERLY. "WARMING UP PRIOR IS VERY IMPORTANT. THIS PREVENTS THE RISK OF INJURY. WHEN WARMING UP, DYNAMIC MOVEMENT STRETCHING, LIKE THE WARM-UP IN THIS WORKOUT, IS RECOMMENDED. STATIC STRETCHING IS GOOD DURING YOUR WORKOUT IN BETWEEN SETS."
- TRAIN HEAVY!
- MAKE SURE YOU INCORPORATE DIFFERENT VARIATIONS OF PRESSES (I.E., ARNOLD PRESS, DUMBBELL PRESS, BAR-BELL PRESS, ETC.)
- CHANGE UP YOUR SHOULDER ROUTINE OFTEN—KEEP THOSE BABIES GUESSING!
- INCORPORATE SUPPLEMENTS INTO YOUR DIET PLAN. CANDICE'S FAVORITES INCLUDE BCAAs, CREATINE, ALLMAX's CARBION (FAST-DIGESTING CARB POWDER FOR POST-WORKOUT), BETA-ALANINE AND ALLMAX's ISOFLX (CLEAN ISOLATE PROTEIN POWDER).

### REVERSE-GRIP BARBELL PRESS

Sit on a bench holding a barbell with a reverse grip. Press the barbell upward and feel the stretch in your shoulders, and lower back down.



### STAGGERED STANCE CABLE LEANING LATERAL RAISE (NOT SHOWN)

Grasp the left cable with the left hand. Begin facing away from the cable machine, one foot in front of the other, slightly leaning forward. Slowly stretch the cables up, keeping elbows slightly bent, until your elbows are parallel to the floor and then slowly lower, all the while leaning forward slightly and making sure your stance stays staggered. Repeat with the other side. »

**CANDICE'S TIP:** "When in the staggered position, bring core tightly in to stabilize pelvic and lumbar area to ensure a more controlled movement with the lateral raise. First lead with the cable pulley. It should be a slow and controlled movement, making sure no other muscles are assisting."





## CABLE ROPE HIGH PULLS

Attach rope on cable machine, set the cable to the highest position. Grasp rope, lean back slightly, and pull rope toward forehead. Repeat.



**CANDICE'S TIP:**  
"I like to grab the ends of the rope with back of hands facing me, thumb position down. Position the pulley slightly above head level. Have a staggered stance for leverage, while keeping core tight, just slightly leaning back. When returning rope to starting position, go nice and slow with a good retraction of shoulders forward."

## REAR DELT REVERSE CABLE FLYE

Face and stand directly in the center of the cable machine, between the two stacks of weight. Set the cable to the lowest position or with just a few plates, and attach a rubber-grip handle. Begin grasping the left high-pulley cable handle with your right hand, and the right high-pulley cable handle with your left hand. Hold hands in front of your chest, elbows bent slightly, and pull the cables back in an arc until your elbows are behind your back. Bring your shoulder blades together, return and repeat.



**CANDICE'S TIP:** "Position pulley at chest/shoulder level. You don't need a lot of weight here—just a few plates. When executing, stand upright with core and pelvis tight. And pull the handle back, elbows leading and really focus on only that rear delt muscle!"



**“EACH SHOW AND EACH YEAR I STRIVE TO BE A BETTER VERSION OF MYSELF, BOTH PHYSICALLY AND MENTALLY.”**

#### FOREARMS TO HANDS ON BOSU

Start in a plank on forearms, then place one palm on Bosu to press up to a plank, using both hands, and then back down to forearms.



#### STEP-UPS WITH HANDS

Get in a plank position behind an aerobics step. Then, step your palms up to a plank with both hands on the step and back down.



#### KEEP UP WITH CANDICE

If you live in Central Florida and wish to purchase ProCakez, contact Candice via Facebook ([IFBBFigureCandiceKeene](#)). You can also find Candice on Twitter (@candicekeene) and Instagram @candicekeene and @poselikeafigurepro)

Candice can be contacted for appearances through [www.fmg-fitnessmanagementgroup.com](http://www.fmg-fitnessmanagementgroup.com).

#### ABOUT CANDICE KEENE

2013 and 2014 IFBB Figure International Champion  
ALLMAX Nutrition and Better Bodies athlete  
Resides in Orlando, FL  
Grew up in Phoenix, Arizona ■

**“YOU MUST BELIEVE IN YOURSELF.”**

# THE TRAIN LIKE THE HOLLYWOOD ELITE EXPERIENCE

Tamisha Harris Wins A Workout With Gunnar Peterson



Halle Berry, Minka Kelly, Sofia Vergara, Jennifer Lopez, Hugh Jackman... these are just a few of the fit bodies Gunnar Peterson has shaped to perfection. And, thanks to 14 To Lean, one lucky FitnessRx reader got to experience a Gunnar training session at his exclusive Beverly Hills facility.

Tamisha Harris, a fitness enthusiast, mom and news producer/writer, decided to enter the 14 To Lean Train Like The Hollywood Elite Contest in hopes of getting a much-needed boost of inspiration. Having previously competed in the NPC, she was no stranger to fitness, but like so many of us, Tamisha was struggling with her goals and full of self-doubt.

While Tamisha expected to come away with a new training approach, her experience offered much more. Gunnar reignited her motivation, squashed her self-doubts and set her on track for a 2015 transformation. Eager to learn what exactly fired her up, I caught up with Tamisha and gleaned some of her new strategies for fitness success.

#### **FRX: Tell us a little about your session with Gunnar.**

**TAMISHA:** As soon as I walked in, I saw Gunnar training singer Ciara. Her body was amazing! The speakers blasted her music during their session. Then it was my turn. He worked me good! The movements were smart. Many trainers have their clients perform unnecessary moves just to show how "different" they are as trainers. Not Gunnar. His moves were precise and purposeful.

#### **FRX: How have you changed your approach to fitness since the experience?**

**TAMISHA:** For training, I no longer do just three to four sets of a particular exercise before moving on to the next. I perform one set of each exercise, then start again from the top until three to four circuits are complete. This keeps my session interesting, and I have less rest time between sets. My body loves this method, I finish faster and my mind stays in the game.

In terms of nutrition, when I'm out with friends, I focus on catching up with my girls instead of mulling over what I can't have on the menu. I get the healthy dish and move on with my life. At work, I always have healthy, ready-to-eat snacks. Most of all, I focus on what feels right going into my body. If God made it, I can eat it. I'm not vegetarian, but I'm eating a lot more colorful fruits and veggies. Yummy!

#### **FRX: In addition to your session with Gunnar, you won his**

#### **supplement system 14 To Lean. How has it helped you?**

**TAMISHA:** I love the 14 To Lean System. The Appetite Suppressant was a dream for me. I'm an impulsive eater, but instead of grabbing food whenever I see it, I now focus on the task at hand. I didn't realize how much time I waste snacking. The Weight Management Energy Catalyst put me in athlete mode. I was a beast in the gym. It put me in a good mood, too. No jitters, just untamable energy unleashed. The Ultra Lean Finishing Compound is my favorite. Gotta love waking up to a flat stomach.

#### **TAMISHA'S 5 FITNESS SUCCESS TAKEAWAYS**

**1. EASE UP.** I come down really hard on myself when I binge or miss a day or four at the gym. I learned to relax and use the voice in my head to uplift me, not stress me out.

**2. IF IT'S A LIFESTYLE, WHAT'S THE RUSH?** If I get to the gym and only feel like doing 20 minutes of training, so what? Do 20 minutes and leave. Come back tomorrow and the next day and the next. It's a lifestyle. You don't have to kill yourself every session. That lesson was truly liberating for me.

**3. DON'T MAKE IT SO DIFFICULT.** Why does it have to be a Broadway production as to whether you go to the gym or eat a piece of chocolate cake? Order your salmon with spinach, have a nice glass of wine and enjoy. Put on your gym clothes and get out. Make the decision you know you're supposed to make and move on with your life.

**4. EAT WELL, EAT DELICIOUSLY.** Jennifer Widerstrom, a coach on "The Biggest Loser," dropped in on my training session and later that day, gave me good, practical tips on eating. My takeaway: If I expect to make healthy eating a lifestyle, then I need to love what I'm eating. Today, I only eat healthy food that's pleasing to my palate.

**5. I CONTROL THIS.** Stop letting weak-minded moments destroy the "lifetime" plan. I may want chips now, but if I wait a few minutes, the craving will pass. Or I can just eat something healthy and crunchy instead. If I do eat the bag of Doritos, I will enjoy them slowly and really taste it.

For more information on 14 to Lean, visit [14ToLean.com](http://14ToLean.com). To see more of Tamisha's training session with Gunnar, check out [fitnessrxwomen.com/TrainWithGunnar](http://fitnessrxwomen.com/TrainWithGunnar).



# KEEP IT SIMPLE

"This program is for people who don't know where to start, have hit that plateau, or have a specific deadline for an event; whether it's a **PHOTO SHOOT, MOVIE SCENE, TRAINING CAMP, WEDDING, SCHOOL REUNION...whatever!**"

— Gunnar Peterson, A-List Celebrity Trainer

After decades of working with some of the most famous people on the planet, Gunnar has mastered the art of the QUICK MAKEOVER, offering *14 to Lean* as your first-hand step into his Beverly Hills based private studio.

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**14toLean.com**



**GunnarPeterson.com**



## FRESHEN UP YOUR FITNESS

Spring cleaning can be about much more than just grabbing a broom and dust mop. To keep you inspired to continue living the fit life, let's freshen things up! Here are my 11 tips to get you started:

- ▶ **1. Set a Realistic Schedule.** If you're just getting back to a workout routine, **don't load yourself with two-hour workouts**, six days a week. You'll only find yourself getting frustrated and will be more likely to give up. Start with three to four days of 30 to 45 minutes and build from there.
- ▶ **2. Get Some New Fitness Apparel.** Most running shoes last somewhere between 300 and 400 miles or six months—whichever comes first. Go to a running specialty store to get fitted and have them assess your gait to find the best shoe for your feet. And **treat yourself to some new workout clothes**—having a cute new outfit to work out in can be an extra motivator to hit the gym. Check out my new clothing line at [www.nicolewilkins.com](http://www.nicolewilkins.com).
- ▶ **3. Clean Out Your Kitchen.** Throw away any foods that are low in nutritional value, or anything still left over from the holidays and Valentine's Day. Replace them with fresh fruits, vegetables, oatmeal, sweet potatoes and brown rice.
- ▶ **4. Update Your Playlist.** Download a fresh workout playlist to get you going. New music always helps kick up the intensity of your workouts.



**MY CURRENT PLAYLIST:**

*David Guetta: "Dangerous"*  
*Calvin Harris: "Outside"*  
*Nick Jonas: "Jealous"*  
*Usher: "I Don't Mind"*  
*Pitbull: "Time of Our Lives"*







- ▶ **5. Try a New Workout.** Sometimes, it helps to switch things up a little if you want to see results, and it's also good mentally to **do workouts that are a little different from your normal routine** so that it doesn't get mundane and boring. If you don't already do yoga or Pilates, give them a try. They are great for staying flexible and could help you perform better in your other workouts.
- ▶ **6. Stretch.** Stretching is the best way to prevent injury, and people often don't stretch enough. **Commit to at least three times a week for 10 minutes after your workout** and you will have a noticeable reduction in stress and muscle soreness.
- ▶ **7. Make An Effort to Drink More Water.** Many of us don't drink nearly as much water as we should, and it's really important to stay hydrated in order to prevent muscle cramping and energy slumps. Aim for about three liters of water a day, and drink up after a vigorous workout to replace the fluids you lost while sweating.
- ▶ **8. Shop at Local Farmers Market.** As the weather is getting warmer, most Farmers Markets are opening up again. **Support your local farmers by shopping for fresh fruits, veggies, salsa, nuts and more.** To find a Farmers Market near you, visit <http://search.ams.usda.gov/farmersmarkets/>.
- ▶ **9. Measure Your Progress.** **Avoid the scale** and instead use a measuring tape to get a more accurate read of your progress. Measure your waist, hips and other target areas every two weeks and take progress pictures. This, in addition to being aware of how your clothes feel, is often more telling than the number on the scale.
- ▶ **10. Have a Specific Goal.** Sign up for a race with a training partner. This gives purpose and a real actual goal to work toward to keep you on track. Local 5K races are perfect for beginners.
- ▶ **11. Reward Yourself.** After you've completed your goal, **treat yourself to a massage**. Not only does it feel great, but it will also help alleviate toxins and speed up muscle recovery.

Be sure to check out [www.nicolewilkins.com](http://www.nicolewilkins.com) for full-length workout videos, recipes, meal plans and much more! For more information and 2015 locations for PHAT Fitness Camps for women of all ages and athletic abilities hosted by Nicole Wilkins, check out [www.getphatwithnicole.com](http://www.getphatwithnicole.com)!

Nicole Wilkins is three-time Figure International and four-time Figure Olympia champion, as well as a Met-Rx sponsored athlete and certified personal trainer. For more with Nicole, check out "The Fit Life" series on [www.fitnessrxwomen.com](http://www.fitnessrxwomen.com). You can also follow Nicole on Facebook, and Twitter: @NicoleMWilkins.

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**MET-Rx®**  
YOU CAN'T FAKE STRONG™

• BY BRET CONTRERAS, MS, CSCS

# TWEAKING EXERCISES FOR GREATER GLUTE ACTIVATION

Small tweaks in exercise form can lead to large increases in gluteal muscle activation, and this increased glute activation will lead to greater growth and development. Most gym goers have to learn these tweaks the hard way over the course of many years. In this article, I hope to expedite your learning curve by teaching you the best ways to perform popular glute exercises.

## Squats

When you perform the squat, there are several things you want to keep in mind in order to better target the glutes. First, you want to keep the weight on your heels throughout the duration of the movement. Second, you want to descend deep. Sink as deep as you can possibly go, but avoid severe posterior tilting of the pelvis. This is commonly referred to as "buttwink," and you want to limit this when deep squatting. Third, you want to keep your knees tracking over the toes throughout the duration of the movement. Don't allow the knees to cave inward at the bottom of the movement. Finally, you want to make sure that your hips don't shoot up during the initiation of the concentric phase. Make sure your hips and knees extend at the same rate and that your torso doesn't become more horizontal as you rise out of the hole in the squat.

## Deadlifts

Deadlifts can be an incredible glute exercise, but you must perform the movement properly. First, set your hips at the optimal level prior to liftoff. You don't want to squat the weight up with low hips, but you also don't want to stiff-leg deadlift the weight up with high hips. An ideal deadlift setup has the hips lower than the shoulders but higher than the knees. Keep a neutral spinal position; don't allow for rounding or overarching. Just as in the case of a squat, you don't want the hips to shoot upward as you begin the lift. Make sure your hips and knees extend at a similar rate. Keep the bar close to the body so that it skims your legs throughout the duration of the movement. When the bar passes the knees, you want to pull the bar into the body while pushing the hips forward and squeezing the glutes to lockout.

## Hip Thrusts

Make sure you hip thrust from the proper bench height. Around 14 to 16 inches is ideal for most lifters. When at the top of the movement, your shins should be perpendicular to the ground, so make sure the feet are set at the appropriate distance away from the buttocks prior to liftoff. Push through the heels and raise the hips as high as possible without overarching the lower back. Make sure that the torso stays flat and the chest doesn't arch upward. At the top of the movement, squeeze the glutes and pause for a brief moment before descending back to starting position.

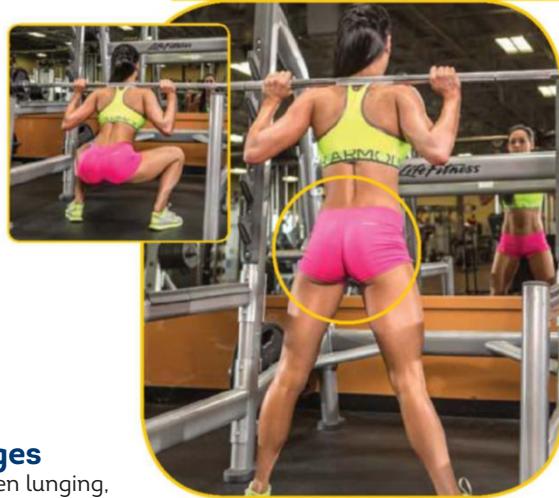


Photo © Ashley Kallaway by Oxygen / James

## Lunges

When lunging, it is important to take ideal step lengths. This is achieved by stepping long enough so that the knees don't move past the toes during the descent. A slight forward lean of the torso will increase glute activation. Descend as deep as possible without allowing the knee of the rear leg to crash into the ground. When rising upward, don't let the hips shoot upward; keep the torso angle constant as you perform the initial rising portion of the movement. Push through the heels and make sure the knee stays in line with the foot during each repetition.

## Back Extensions

The back extension is actually one of the most effective glute exercises as long as you perform the movement in a particular manner. First, flare the feet outward— you want them at around a 45-degree angle. Second, round the upper back and keep it rounded throughout the duration of the movement. This decreases back muscle activation and shifts more of the burden onto the glutes. When rising upward, push the hips forcefully into the pad. Squeeze the glutes hard at the top of the movement and make sure the spine does not move into extension.

## Conclusion

On the surface, these alterations in technique may not seem like they amount to much. However, I have tested the gluteal electromyography activity with numerous clients, and I have learned that these tweaks often double the amount of glute activation elicited during the movement. Experiment with these techniques and watch your glutes grow stronger and shapelier. ■

Bret Contreras is the founder and owner of the world-renowned research and training facility, The Glute Lab. Considered by many as the world's foremost expert on glute training, Bret is also the inventor of the glute-sculpting machine called the Hip Thruster, the coauthor of Strong Curves, the author of Bodyweight Strength Training Anatomy, the co-founder of Get Glutes, the cofounder of Strength & Conditioning Research, and editor in chief of Personal Trainer Quarterly. Bret is currently pursuing his Ph.D. in sports science at AUT University. Check out Bret's popular blog at [www.BretContreras.com](http://www.BretContreras.com) and his FitnessRx online column at [www.fitnessrxwomen.com/author/bret-contreras](http://www.fitnessrxwomen.com/author/bret-contreras)

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**Q ARE THERE EXERCISES FOR THE GLUTES THAT WORK BETTER THAN OTHERS? I FEEL LIKE I HAVE SQUATTED UNTIL I'M BLUE IN THE FACE WITH POOR RESULTS.**

Studies show that the glutes work harder in the squeezed position than in the stretched position of a movement. This is important to know because exercises like hip thrusts and glute raises really emphasize the squeeze portion of the movement, as opposed to squats and good mornings that do more stretching. Since the primary focus of the glutes is hip extension, rotation and abduction, it's important to train the glutes in a way that supports each one of these functions. Squats definitely have a place in glute training because they move the hips up and down, while exercises like hip thrusts, glute raises and cable hip rotations move the hips back and forth. To train the hips from side to side, you'd want to include exercises with bands or the abduction machine.

These are only a small portion of the exercises that you could perform to help grow your glutes. Along with a multitude of squats, think goblet, front squats, split squats, skater squats and pistol squats, there are also step-ups, a variety of lunges from walking to reverse, as well as deadlifts, hyperextensions and the glute/ham raise. The important thing is to perform enough of a variety that your glutes are hit from many angles. Also, consider incorporating glute-focused exercises at least twice a week, if not three, provided you get enough rest for recovery.

**Q I FEEL LIKE I DO WELL WITH THE BIGGER MEALS OF MY DAY, BUT I'M WORRIED THAT MY SNACKING MAY BE SABOTAGING MY EFFORTS. ARE THERE CERTAIN GUIDELINES THAT I SHOULD FOLLOW AS TO HOW MUCH AND WHAT CALORIC RANGE TO CHOOSE?**

Snacks can certainly become an issue if not approached correctly. I personally like to refer to them as mini-meals instead of snacks because they should contain a combination of lean protein and complex carbohydrates and should be in a range of about 150 to 300 calories, depending on your fitness goals. A decent guideline is about half the calorie content of a larger meal.

There is evidence that shows that eating every three hours does not necessarily increase your metabolism, but it does help keep blood sugar steady and provide sustained energy. Therefore, it's a good idea to schedule your snacks for a time that falls two to three hours between your larger meals. If you don't, you might be eating too close to your other meals, which may add too many calories. For example, if you eat breakfast at 9:00 a.m. and lunch at noon, a snack should not be necessary between meals because that is only a three-hour window. However, if you wake up at 7:00 a.m. and eat breakfast and don't have lunch until noon, a 9:00 a.m. snack would be ideal.

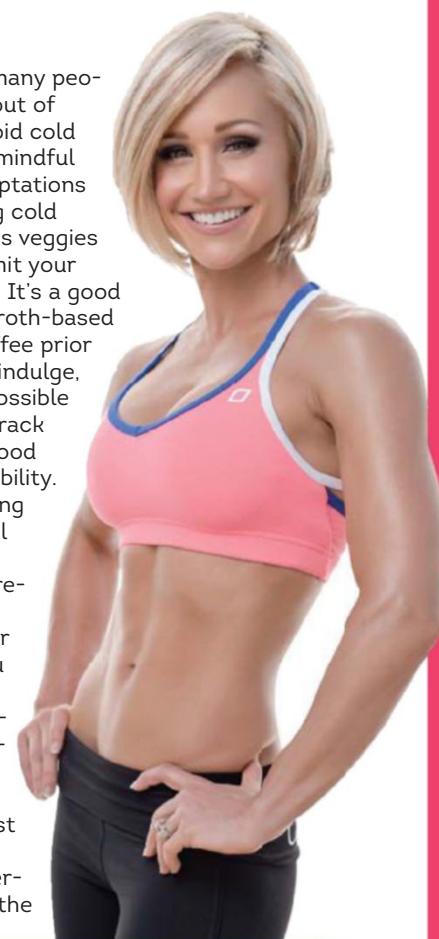
It's also worth mentioning that you should be planning your snacks. Don't just spontaneously grab something or you might not be making the best choices. Have things like hummus and veggies, cherry tomatoes with cottage cheese, rice cakes with almond butter or Greek yogurt with an apple at the ready, and eat slowly to really enjoy the snack and help your brain register that you've eaten.

**Q AS THE WEATHER GETS COLDER I ALWAYS FIND THAT MY NUTRITION STARTS TO SLIP AND THE POUNDS START CREEPING BACK ON. I DON'T KNOW IF IT'S BECAUSE I'M COVERED UP SO I JUST QUIT TRYING, BUT I'D LIKE TO FIND A WAY TO AVOID THAT THIS TIME AND START THE NEW YEAR OFF RIGHT. ANY TIPS?**

You're not alone. For many people the mantra is true—out of sight, out of mind. To avoid cold weather weight gain, be mindful of the comfort food temptations that often beckon during cold weather. Fill up on fibrous veggies and lean proteins and limit your portion size at mealtime. It's a good idea to try to fill up on broth-based soups and hot tea or coffee prior to eating and if you overindulge, get moving as soon as possible and aim to get back on track immediately. Keeping a food log is great for accountability. Seeing what you are eating will help you stay mindful and hopefully avoid slip-ups. Make an effort to prepare lower fat, more healthful versions of your usual comfort foods. You might be surprised how much you like the "cleaner" version of your favorite foods and not miss the full-fat or full-sugar versions at all. Also, enlist the help of friends and family, and come summertime you'll have avoided the setbacks. ■

*Have a question for Jamie? E-mail it to [editor@fitnessrxwomen.com](mailto:editor@fitnessrxwomen.com).*

JAMIE EASON MIDDLETON IS A FORMER NFL CHEERLEADER AND A FIGURE COMPETITOR. JAMIE HOLDS A BACHELOR'S DEGREE IN COMMUNICATION AND HAS APPEARED IN HUNDREDS OF MAGAZINES BOTH AS A MODEL AND A CONTRIBUTING WRITER. AS CREATOR OF THE POPULAR *LIVEFIT TRAINER*, JAMIE HAS HELPED HUNDREDS OF THOUSANDS OF PEOPLE REACH THEIR FITNESS GOALS.





# FitRx CoolDOWN

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# GOING TO THE BAR METHOD



Burr Leonard

## There's Pure Barre, BarreConcept and even AntiGravity AIRbarre— and more.

You may have seen these studios, and similar ones, popping up in your local community, as it seems like barre-based exercises classes are everywhere these days. So what is it about these workouts that has everyone going to the barre?

### Toning Quickly

Burr Leonard is the founder and creator of The Bar Method, one of the first and most popular barre-fitness studios, which now has locations all over the U.S. and Canada. "It's a fun and highly efficient body reshaping program," said Burr. The aim is to lean and tone, targeting problem areas that are hard to reach, she added, resulting in dramatic changes to the students' bodies.

"Barre fitness in general is a great way to tone quickly," said Burr. "Ballet is also great to tone your legs; just standing at the barre, you have support and you are working the rest of your body."

People that have never tried a barre class before are often surprised at how intense the class actually is, said Burr. "We go muscle by muscle, body part by body part," she said. "You are really engaging the whole body in a class."

In a typical class at The Bar Method, you will see interval training, push-ups, weights, posture work, hamstring and calf work at the barre, lots of active and passive stretching, and more. The exercises are done in a specific order, alternating between the front and back sides of the body, which enables the students to work one side of the body, while elongating the side they just worked. The second half of the class includes aerobic exercises to really increase the calorie burn.

### Barre Beginnings

The Bar Method and other similar barre-based workouts can be traced back to the 1930s, when Lotte Berk, a German dancer who fled the Nazis in the late 1930s, went to London. After injuring her back from

dance, she had the idea to use her ballet barre dance conditioning routine for rehabilitative purposes. She then opened the first Lotte Berk Method Studio in London in 1959, and the first U.S. studio



opened in 1971. And 10 years later, The Bar Method founder Burr Leonard took her first Lotte Berk Method class.

Burr traveled to London in the '90s to meet with Lotte Berk, and was inspired to buy a license and operate a Lotte Berk Method studio in Connecticut. She opened three more studios, and began to realize that some of her clients' knees, back and shoulders were not responding well. She enlisted a physical therapist to re-work some of the exercises. Thus, in 2000, The Bar Method was born (the Lotte Berk Method is still in existence as well).

What separates The Bar Method from other barre-based workouts, said Burr, is the teacher training program. The Bar Method teachers go through a three- to five-month training program, must pass a series of exams in order to be qualified, and are also evaluated every year. In the training programs, instructors learn how to safely deliver The Bar Method to their students.

"In the class, you'll experience not only an exercise routine, but you will also be learning how to better control your body," said Burr. An important aspect, for instance, is learning correct posture.

In addition, every teacher is required to know the name of each student in class, and the studios themselves are evaluated and must be kept clean.

"We are very hands-on as a brand because we care passionately about quality, and we want to give students a great

workout [at whatever location] they go," said Burr.

### A Workout for Everyone

Perhaps the most intriguing thing about The Bar Method is that it really is a workout for everyone— young or old, male or female, fitness beginner or fitness veteran, and even athletes who want to improve their performance, etc. Anyone can benefit from barre-based workouts, said Burr.

"There are stories of young people, old people, people that were overweight who were able to go the distance, so many people who had chronic pains," said Burr. "What's really interesting is the people who are very fit who come in— they are astounded; they didn't expect it... it's very intense," said Burr.

But beginners to exercise can also benefit from The Bar Method, as it is "built around options," said Burr. Teachers are trained to give exercise alternatives to beginners. "It's part of our technique."

Burr suggests that participants do a Bar Method class three to five times a week to really see results. Since it's a complete workout, three is enough, but some people go five days to take things up a notch.

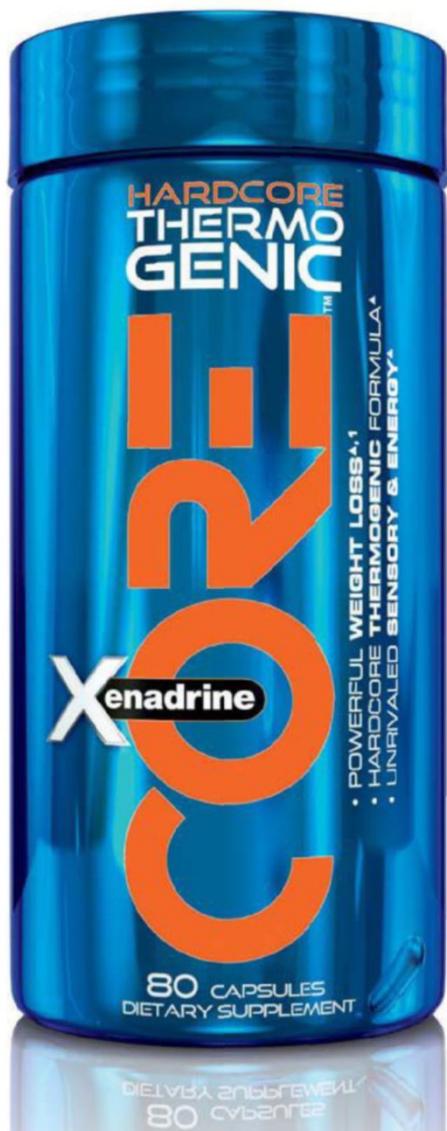
"It is transformative," said Burr. "It's not just a workout; it will change your body and your life, and it is addictive."



### Try It Out

If there isn't a Bar Method studio near you, it's more than likely that there are other similar options you can try. You can also try The Bar Method's recently launched Bar Online at [baronline.barmethod.com](http://baronline.barmethod.com). ■

# HARD TO THE CORE

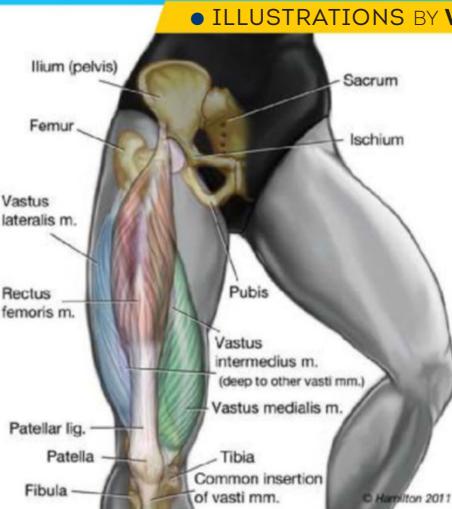


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• BY STEPHEN E. ALWAY, PH.D., FACSM

• ILLUSTRATIONS BY WILLIAM P. HAMILTON, CMI



## SHAPE YOUR THIGHS FOR SUMMER WITH

# SINGLE-LEG SPLIT SQUATS

**After the seemingly hours of aerobics you did all winter, you might think your thighs don't need much refining for the quickly approaching summer season.** However, the thighs and hips may not be particularly firm unless they get a direct hit on a semi regular basis. That does not mean that you need to engage in endless sets of leg presses or squats, although those are pretty great exercises. Instead, to break up your routine, you might consider single-leg squats as an excellent alternative to almost every thigh exercise.

Not only will this exercise build thigh strength and shape, it will also develop an unprecedented level of balance better than any other leg exercise. However, the added balance component makes the single-leg bench squat much more difficult to perform than the normal squats or leg presses. If you are just starting out, you don't even need extra weight. But after a while, you can add 10- to 15-pound dumbbells to each hand and you will start to see your thighs explode with firmness and shape.

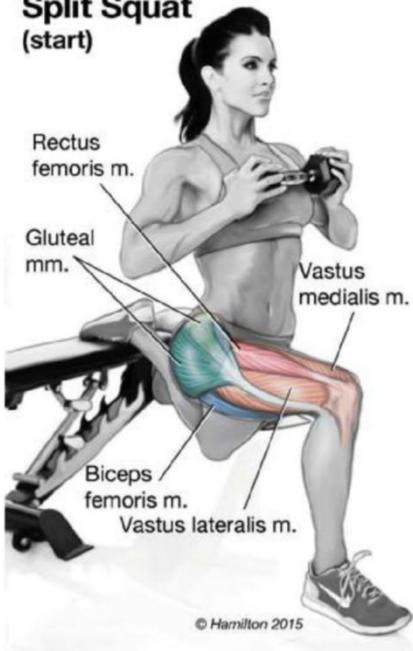
### Muscle Structure and Function

The single-leg squat involves many thigh muscles, but only the primary muscle groups will be discussed here. The four muscles that make up the quadriceps femoris cover the anterior (front) and lateral (outer side) parts of the femur bone of the thigh.<sup>1</sup> The three vasti muscles attach to different regions of the femur bone of the thigh. The vastus lateralis muscle attaches to the lateral side, the vastus medialis muscle connects to the medial part and the vastus intermedius muscle covers the central, anterior part of the femur

bone of the thigh. Unlike the vastus muscles, the rectus femoris of the quadriceps group begins on the hip bones at the iliac crest just above the position of the hip joint.<sup>1</sup> The muscle fibers of the rectus femoris project straight down from the hip to the knee. The tendons from the three vastus muscles and the rectus femoris join to form the quadriceps tendon. The quadriceps tendon attaches to the patella (knee cap) and via the patellar ligament, then it anchors on the tibia bone of the lower leg. Together, the quadriceps femoris group straightens the knee, which provides much of the upwards lift of the single-leg squat.

Although you might know that the hamstrings have an important role in flexing the knee (heel towards the hips), they are strongly activated during the upwards phase of the single-leg squat.<sup>2</sup> Each of the three hamstrings muscles begin on the ischial tuberosities,<sup>1</sup> on the lower part of the pelvis (you sit on when you are in a chair). The long head the biceps femoris connects into a thick tendon, which crosses the lateral side of the knee joint to connect to the fibula bone of the leg just below the knee. The fibers of the semitendinosus cross the knee joint posteriorly and attach to the medial side of the tibia bone of the leg just below the knee.

## Split Squat (start)



The fibers of the gluteus maximus muscle are strongly activated in the single-leg squat.<sup>3</sup> This large muscle connects to the crest of the ilium, a major hip bone, the posterior surface of the sacrum and the lumbar area of the hip girdle.<sup>1</sup> It inserts on the posterior part of the femur bone of the thigh and also on a tough strip of connective tissue (iliotibial band of the fascia lata) that extends from the hip down the lateral side of the thigh to the knee. The gluteus maximus extends the thigh,<sup>1</sup> and helps to push upwards in the single-leg squat.

The semimembranosus muscle of the hamstring group runs down the posterior thigh to connect on the medial condyle of the tibia bone just below the knee joint.<sup>1</sup> The hamstrings are strong extensors of the posterior thigh and like the gluteal muscles contribute to the upward phase of the squat.<sup>2</sup>

## EXECUTION OF SINGLE-LEG SQUAT ON BENCH

- Stand in front of a flat bench with your hands to the sides. Stand facing away from bench. Flex the knee of one limb and place the top of foot on the bench behind you. Keep your hands on your hips to maintain your balance and body position.

- Keep your torso upright. Flex the knee and hip of the support leg and squat down so the knee of the rear leg on the bench flexes and almost makes contact with the floor. The front knee should point in the same direction as the foot throughout the entire movement.

- Return to original standing position by extending hip and knee of the forward leg. Since the gluteus maximus and hamstring muscles are strong hip (thigh) extensors, they are most active during the upward push of the single-leg squat<sup>3</sup> and therefore, training these muscles will improve your overall leg power.<sup>4</sup>

Repeat the sequence until the desired number of repetitions is done with the first leg (e.g., 12 repetitions).

- Rest briefly, then switch to the other leg. Repeat the same one-leg squat sequence.

- Inhale on the way down and exhale on the way up in each squat.

## Split Squat (finish)



As you get stronger, you can take a light dumbbell in each hand, and when 15 repetitions gets easy you can go up a little in resistance, but do not feel compelled to grab heavy dumbbells for this exercise.

It will only take a few sets of 15 repetitions<sup>5</sup> before you will begin to feel the intensive difference from other exercises. This exercise is strict but safe,<sup>6</sup> yet you will have to be careful that you maintain good balance throughout the exercise, especially as you start to fatigue.<sup>7</sup> While the exercise is not easy, your legs should not feel so devastated that you feel the need to crawl out of the gym either. This exercise is effective without killing you, and that is the best way to see the transformation to an amazing lower body before summer. ■

## REFERENCES

- Moore, KL and AF Dalley. Clinically oriented Anatomy. Fourth edition. Baltimore, Lippincott Williams & Williams, 1999. 531-546.
- Maddigan ME, Button DC, Behm DG. Lower-limb and trunk muscle activation with back squats and weighted sled apparatus. *J Strength Cond Res* 2014;28:3346-3353.
- Bolgia L, Cook N, Hogarth K et al. Trunk and hip electromyographic activity during single leg squat exercises do sex differences exist? *Int J Sports Phys Ther* 2014;9:756-764.
- de Villarreal ES, Izquierdo M, Gonzalez-Badillo JJ. Enhancing jump performance after combined vs. maximal power, heavy-resistance, and plyometric training alone. *J Strength Cond Res* 2011;25:3274-3281.
- Kok LY, Hamer PW and Bishop DJ. Enhancing muscular qualities in untrained women: linear versus undulating periodization. *Med Sci Sports Exerc* 2009;41:1797-1807.
- Ugalde V, Brockman C, Bailowitz Z et al. Single Leg Squat Test and Its Relationship to Dynamic Knee Valgus and Injury Risk Screening. *PM R* 2014.
- Hooper DR, Szivak TK, Comstock BA et al. Effects of fatigue from resistance training on barbell back squat biomechanics. *J Strength Cond Res* 2014;28:1127-1134.

# SAUNA: Burn Fat, Enhance Endurance & Recovery



Saunas have traditionally been used for relaxation, especially after an intense workout. However, more recently, saunas are being used as a performance-enhancing technique in addition to their use as a post-workout muscle-relaxing method. This is because increasing your core temperature for short periods of time in a sauna apparently offers significant benefits, including increased muscular endurance, greater growth hormone release and superior muscle growth.

## Sauna Increases Muscular Endurance

The heat stress of a single sauna session triggers a decrease in red blood cell concentration within the blood by way of a process known as hemodilution,<sup>1</sup> where the volume of the fluid portion of the blood increases, effectively lowering red blood cell concentration. The apparent lowering of red blood cell levels stimulates the body to produce more red cells by releasing the hormone erythropoietin (EPO).<sup>2</sup> After being released into the bloodstream, EPO converts immature red blood cells into a fully developed red blood cell capable of carrying oxygen throughout the body. This increased oxygen delivery, especially to muscle tissue, boosts the oxidation of fats and sugars for increased energy levels within muscle that should enhance exercise endurance.

In order to see whether sauna use improved muscular endurance, a study by Scoon et al.<sup>3</sup> looked at the effects of sauna use after exercise in a group of distance runners. The runners completed three weeks of training with and without post-workout sauna bathing, then had their endurance tested with a 15-minute treadmill run to exhaustion. The results showed that sauna-bathing increased run time to exhaustion by 32 percent. In addition, red blood cell volumes increased by 7.1 percent after sauna use relative to the control where the changes in red blood cell volume correlated with the increase in exercise endurance. The authors of this study concluded that post-exercise sauna

bathing produced a considerable improvement in muscular endurance that was likely caused by increasing red blood cell levels.

## Increase Growth Hormone (GH) Release with Sauna

GH is a protein molecule secreted by the anterior pituitary gland that activates several biochemical signaling cascades, promoting an anabolic environment and fat loss. One of the primary ways that GH triggers lean muscle growth is by setting off the production of the insulin-like growth factor 1 (IGF-1), which produces muscle growth by increasing muscle cell protein synthesis.<sup>4</sup> In addition, GH also activates lipolysis within the fat cell, ultimately causing fat loss.<sup>5</sup>

The sauna can be used to enhance lean muscle growth and fat loss by increasing GH release, as several studies have clearly shown that sauna use elevates GH levels. In fact, these studies show that increasing sauna time or sauna temperature correspondingly increases the amount of GH released. The first study involved two 20-minute sauna sessions at 176 degrees Fahrenheit separated by a 30-minute cooldown, and resulted in a twofold increase in GH levels.<sup>1,6</sup> While, in a second study, two 15-minute sauna sessions at a higher temperature of 212 degrees Fahrenheit, also separated by a 30-minute cooldown period, generated a larger increase in GH of approximately fivefold.<sup>1,6</sup> Finally, a third study involving the longest time exposure of two one-hour sauna sessions at 176 degrees Fahrenheit increased growth hormone the most with a 16-fold increase in GH.<sup>7</sup> Interestingly, another study also showed that when sauna use and exercise are combined, they synergistically increased GH,<sup>8</sup> suggesting that the sauna use after exercise is the most effective way to produce a more robust release of GH for elevated lean muscle growth.

## Sauna Use Improves Insulin Sensitivity

Insulin is an endocrine hormone that primarily regulates glucose homeostasis, in large part, by promoting the cellular uptake of glucose from the blood. In addition, insulin is also one of the most anabolic hormones produced in the human body, possessing the ability to drastically increase muscle protein synthesis and decrease muscle protein degradation for enhanced lean muscle growth.<sup>9</sup> Insulin achieves this lean muscle-building effect by binding to the insulin receptor and setting off a cascade of signaling events that activates the enzyme mTOR, which triggers muscle cell protein synthesis and mitigates muscle protein breakdown.<sup>10,11</sup>

The ability of sauna use to improve insulin sensitivity represents another way that the sauna likely promotes lean muscle growth, as greater insulin sensitivity should support a more vigorous anabolic response to insulin release, ultimately increasing muscle hypertrophy. This effect was shown in a study by Kokura et al.,<sup>12</sup> where they found that 30 minutes of sauna, three times per week, resulted in a considerable decrease in circulating insulin levels in insulin-resistant mice along with a reduction in blood sugar, indicating that lower amounts of insulin were actually having a greater response in the body. Of course, this means that normal insulin levels, found in non-diabetic mice or humans, would have an even greater anabolic response after sauna use based on the increase in insulin sensitivity, which would bolster greater amounts of lean muscle growth.

## Greater Blood Flow for Improved Muscular Function

Sauna therapy has been used to treat a number of different diseases caused by a deficiency of the cofactor tetrahydrobiopterin (BH4).<sup>13,14,15</sup> Sauna therapy may increase BH4 availability by directly increasing the production of a heat shock protein known as HSP90.<sup>16</sup> Heat shock proteins (HSPs) are proteins that are produced in the body in response to heat shock, where they function by repairing damaged proteins or preventing the degradation of others.

In response to the heat from a sauna, the heat shock protein HSP90 is produced where it apparently prevents the degradation of a key enzyme involved in the production of the cofactor BH4. The resulting increase in BH4 should increase the production of the potent vasodilator nitric oxide (NO), as BH4 is the cofactor for the enzyme family that catalyzes the production of NO. All things considered, greater vasodilation stimulated by the increased amount of NO would result in improved circulation to working muscles that would bring in more essential nutrients and oxygen while simultaneously removing metabolic waste, ultimately improving muscular function and exercise endurance. ■

For most of Michael Rudolph's career he has been engrossed in the exercise world as either an athlete (he played college football at Hofstra University), personal trainer or as a Research Scientist (he earned a B.Sc. in Exercise Science at Hofstra University and a Ph.D. in Biochemistry and Molecular Biology from Stony Brook University). After earning his Ph.D., Michael investigated the molecular biology of exercise as a fellow at Harvard Medical School and Columbia University for over eight years. That research contributed seminally to understanding the function of the incredibly important cellular energy sensor AMPK—leading to numerous publications in peer-reviewed journals including the journal *Nature*. Michael is currently a scientist working at the New York Structural Biology Center doing contract work for the Department of Defense on a project involving national security.

**The sauna can be used to enhance muscle growth and fat loss by increasing GH release, as several studies have clearly shown that sauna use elevates GH levels.**

## REFERENCES

- Hannuksela, M.L., and Ellahham, S. (2001). Benefits and risks of sauna bathing. *Am J Med* 110, 118-126.
- Pagel, H., Jelkmann, W., and Weiss, C. (1988). A comparison of the effects of renal artery constriction and anemia on the production of erythropoietin. *Pflugers Arch* 413, 62-66.
- Scoon, G.S., Hopkins, W.G., Mayhew, S., and Cotter, J.D. (2007). Effect of post-exercise sauna bathing on the endurance performance of competitive male runners. *J Sci Med Sport* 10, 259-262.
- Schiaffino, S., and Mammucari, C. (2011). Regulation of skeletal muscle growth by the IGF1-Akt/PKB pathway: insights from genetic models. *Skelet Muscle* 1, 4.
- Sengupta, K., Long, K.J., and Allen, D.O. (1981). Growth hormone stimulation of lipolysis and cyclic AMP levels in perfused fat cells. *J Pharmacol Exp Ther* 217, 15-19.
- Kukkonen-Harjula, K., Oja, P., Laustiola, K., Vuori, I., Jolkkonen, J., Siitonen, S., and Vapaatalo, H. (1989). Haemodynamic and hormonal responses to heat exposure in a Finnish sauna bath. *Eur J Appl Physiol Occup Physiol* 58, 543-550.
- Leppäläluoto, J., Huttunen, P., Hirvonen, J., Vaananen, A., Tuominen, M., and Vuori, J. (1986). Endocrine effects of repeated sauna bathing. *Acta Physiol Scand* 128, 467-470.
- Ftaïti, F., Jemni, M., Kacem, A., Zaouali, M.A., Tabka, Z., Zbidi, A., and Grelot, L. (2008). Effect of hyperthermia and physical activity on circulating growth hormone. *Appl Physiol Nutr Metab* 33, 880-887.
- Hillier, T.A., Fryburg, D.A., Jahn, L.A., and Barrett, E.J. (1998). Extreme hyperinsulinemia unmasks insulin's effect to stimulate protein synthesis in the human forearm. *Am J Physiol* 274, E1067-1074.
- GUILLET, C., PRODHOMME, M., BALAGE, M., GACHON, P., GIRAUDET, C., MORIN, L., GRIZARD, J., and BOIRIE, Y. (2004). Impaired anabolic response of muscle protein synthesis is associated with S6K1 dysregulation in elderly humans. *Faseb J* 18, 1586-1587.
- Biolo, G., Declan Fleming, R.Y., and Wolfe, R.R. (1995). Physiologic hyperinsulinemia stimulates protein synthesis and enhances transport of selected amino acids in human skeletal muscle. *J Clin Invest* 95, 811-819.
- Kokura, S., Adachi, S., Manabe, E., Mizushima, K., Hattori, T., Okuda, T., Nakabe, N., Handa, O., Takagi, T., Naito, Y., Yoshida, N., and Yoshikawa, T. (2007). Whole body hyperthermia improves obesity-induced insulin resistance in diabetic mice. *Int J Hyperthermia* 23, 259-265.
- Porkert, M., Sher, S., Reddy, U., Cheema, F., Niessner, C., Kolm, P., Jones, D.P., Hooper, C., Taylor, W.R., Harrison, D., and Quyyumi, A.A. (2008). Tetrahydrobiopterin: a novel antihypertensive therapy. *J Hum Hypertens* 22, 401-407.
- Antoniades, C., Shirodaria, C., Crabtree, M., Rinze, R., Alp, N., Cunningham, C., Diesch, J., Tousoulis, D., Stefanadis, C., Leeson, P., Ratnatunga, C., Pillai, R., and Channon, K.M. (2007). Altered plasma versus vascular biopterins in human atherosclerosis reveal relationships between endothelial nitric oxide synthase coupling, endothelial function, and inflammation. *Circulation* 116, 2851-2859.
- Yamamoto, E., Kataoka, K., Shintaku, H., Yamashita, T., Tokutomi, Y., Dong, Y.F., Matsuba, S., Ichijo, H., Ogawa, H., and Kim-Mitsuyama, S. (2007). Novel mechanism and role of angiotensin II induced vascular endothelial injury in hypertensive diastolic heart failure. *Arterioscler Thromb Vasc Biol* 27, 2569-2575.
- Pall, M.L. (2009). Do sauna therapy and exercise act by raising the availability of tetrahydrobiopterin? *Med Hypotheses* 73, 610-613.

# TABATA:

## The 4-MINUTE Workout

Are you looking for a fat-burning workout that delivers real results in a small amount time? Then say hello to the fiery training program of Tabata!

Originally tested and formulated by Izumi Tabata himself, Tabata is a scientifically tested four-minute timed-intensity training protocol, said PJ Stahl, MC, CSCS, a Tabata program director and owner/head coach at Lock Box LA. "[Tabata] consists of eight sets of 20 seconds of supra-maximal work, what we call *overdrive*, followed by 10 seconds of rest/recovery. In other words, you will be taken to your absolute limit for 20 seconds, then rest for 10 seconds. Repeat eight times for a total of only four minutes to get you fitter faster."

### Why It Works

The ACE (American Council on Exercise) sponsored a study that set out to find the physiological responses to Tabata. Researchers tested a group of 16 individuals of moderately fit to very fit women and men, ages 20 to 47, with a makeshift 20-minute Tabata routine, (eight reps of 20 seconds of work, 10 seconds of rest) one minute of rest between each round, and a 10-minute cooldown. The results? On average, the subjects averaged 86 percent of heart rate max (range of 84-88 percent) and 74 percent of VO<sub>2</sub> max—both of which meet or exceed established industry guidelines for improving cardio fitness and modifying body composition. In addition, the participants burned between 240 and 360 calories in 20 minutes.

In another study published in *Strength and Conditioning Research*, 25 recreationally active female students were divided into three groups: a control group, a Tabata group and an endurance group. The endurance group performed 30 minutes of treadmill running at around 85 percent of maximal heart rate, four days per week for four weeks. The Tabata group performed calisthenics or circuit-training in eight intervals of 20 seconds separated by 10 seconds of rest, four times per week, using one exercise for each four-minute session (exercises in the Tabata protocol included high knee runs, jumping rope, burpees, mountain climbers, push-ups and more). The researchers found that while both groups improved their VO<sub>2</sub>-max by 7 to 8 percent, and both groups improved on the muscular endurance tests, the Tabata group improved in more of the tests. The researchers found that four days per week of whole-body, Tabata-style training led to similar improvements in VO<sub>2</sub>-max and that when it came to muscular endurance, there were greater improvements with Tabata than with traditional endurance training.

Because it is so effective, PJ has taken the Tabata idea and put another own spin on it. "In collaboration with

Professor Izumi Tabata, I have created a new and highly effective approach to utilize the Tabata protocol," he said. The

Tabata Body Program is a 20-minute workout that uses full-body exercises, specifically selected, and raises "your heart rate to intensities equivalent to Professor Tabata's original lab studies," PJ said. "This is the key to getting you in the best shape of your life."

Tabata is all about thresholds and barriers—and then breaking through them, said PJ. "You'll enter the Tabata Overdrive Zone, where caloric expenditure and adaptation are at their peak. This is why it works for anyone, regardless of your current fitness level."

As part of a regular fitness program, PJ recommends doing Tabata two to three days per week (depending on your fitness level and experience), some type of strength training two to four days per week, one day of longer duration steady-state cardio, one to two days of yoga or mobility-style workouts and one day completely off as your rest/recovery day.

### Safety Precautions

When working at the intensity required for Tabata and a Tabata Body Program, safety is top priority, said PJ. Here are his safety recommendations:

**Form:** Always keep correct form for every movement. This is about building on a foundation of movement patterns.

**Threshold:** Push to your threshold without sacrificing form.

**Body Control:** When performing new movements and/or plyometrics, you must keep control of your body. You will progress very fast, so there's no need to rush it.

**Modifications:** Work at your own intensity levels. Try modified movements shown if the exercises are above your ability or you don't feel comfortable doing them right away.

### REFERENCES

Beardsley, Chris. "Research Review: Tabata Revisited and the Reality of Core Training." *Greatist*. Web. 20 Jan. 2015.

Emberts, Talisa, John Porcari, P., Jeffery Steffen, Scott Doberstein, and Carl Foster. «Is Tabata All It's Cracked Up To Be?» *ACE Fitness*. Web. 20 Jan. 2015.

## ALL ABOUT TABATA

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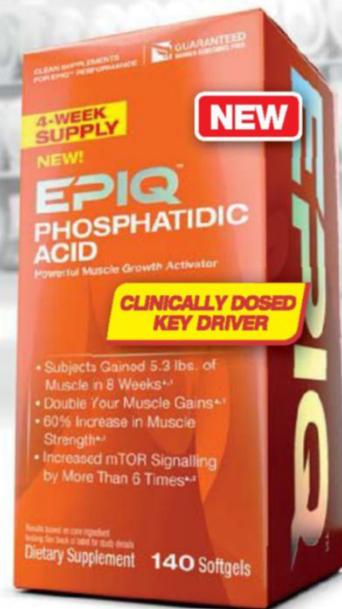
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## TABATA BODY PROGRAM

Tabata training is certainly something that can be done as a workout on its own, but in PJ's Tabata Body Program, it's part of a 20-minute workout. Here's how a typical program works, demonstrating how Tabata can be part of a larger workout:

- **Warm-Up:** Dynamic movements that are designed to increase your heart rate, core temperature, flexibility and start warming up the movement patterns that your body is going to need for the workout to come.
- **Conditioning/Cardio:** Strength, cardio, stability, plyometrics, corrective and postural exercises.
- **Tabata:** Professor Tabata's tested 20/10 formula of 20 seconds "on" maximum-intensity training, and 10 seconds "off" for recovery; repeated eight times for a total of four minutes. "This is where we can elicit anaerobic and aerobic changes along with EPOC that will give us a caloric after burn to get physical results," said PJ.
- **Core:** The purpose of the Core Module is to strengthen the core when the body is at its highest level of fatigue, in order improve muscular endurance and stability.
- **Cooldown:** Focuses on flexibility exercises that will increase joint range of motion and muscular length to recover and improve overall mobility.

### TWO TABATA BODY PROGRAM EXERCISES TO TRY

PJ shared two exercises that can be used in a Tabata workout:

**ROCKET JUMP:** Start in a squat stance with your hands clasped together in front of your chest. You then perform a squat and jump as high and as fast as you can off the floor. When you are jumping, you are simultaneously punching your hands towards the ceiling and locking your arms out above your head.

#### Good form:

- Shoulder-width stance
- Neutral spine position maintained during movement
- Heels connected to the floor during the squat
- Triple extension of the ankles, knees and hips on the jump
- Knees track inline with the toes

**ANGLED RUNNING MAN:** Start by setting one foot in front of the other in a high lunge position, with the back leg straight, and staying high on the back toes. In this position, try to keep the body at a 45-degree angle and elbows bent at 90 degrees when performing the movement. From here, switch feet as fast as possible while switching opposite arms and legs at the same time.

#### Good form:

- Legs in a high lunge position with the back leg straight
- Front heel is connected to the floor—high on the back foot toes
- Body angle from head to back leg toes should be at 45 degrees
- Neutral spine position maintained during movement
- Elbows bent at 90 degrees
- Jump and switch opposite arms and legs at the same time
- Knees track inline with the toes

To learn more about Lock Box LA go to [www.LockBoxLA.com](http://www.LockBoxLA.com) or email: [info@LockBoxLA.com](mailto:info@LockBoxLA.com). ■

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# STRENGTH TRAINING

# for Fat Loss

Although any type of physical activity can have positive health benefits, the benefits of steady-state cardio training from a fat-loss (without muscle loss) perspective are often misunderstood and overstated. Especially because research has shown aerobic activity to be the optimal mode of exercise—over resistance training—for reducing body fat in a timely fashion.<sup>1</sup> Cardio works faster than weight training in these short-term studies comparing cardio training to weight training for fat loss, because cardio tends to burn more calories per minute during the workout than traditional resistance training methods. And, it's well-established that fat loss is determined by burning more calories each day than you consume.<sup>2</sup>

It's important to note this isn't to discount that some calories are more nutrient dense than others; we've all heard the term "empty calories" before, but one can still gain fat from eating "healthy" nutrient dense foods, if they eat too many calories.

Now, with the above reality in mind, instead of spending the extra time doing more cardio to burn (let's say) 300 calories, you can simply cut 300 calories out of your diet each day and end up with the same result without having to bother with all the boredom and time consumption involved with the additional cardio. This is why cardio training isn't emphasized in my book *Strength Training for Fat Loss*, as in most cases, you essentially eliminate the need for it (from a fat-loss perspective) when you simply eat fewer calories to create a deficit.

## Fat Loss Without Muscle Loss

The calories consumed versus calories burned issue is only half of the healthy fat-loss puzzle because you certainly don't want to lose muscle. Plus, a 1999 study published in the *Journal of the American College of Nutrition* really drives home the importance of focusing primarily on strength training, not cardio training methods, while in a caloric deficit.<sup>3</sup>

The study looked at two groups of obese subjects put on identical very low-calorie diets. One group was given an aerobic exercise only protocol (walking, biking or jogging four times per week), and the other group was given resistance training only, three times per week. After 12 weeks, both groups lost weight. The aerobic exercise group lost 37 pounds, 27 of which was fat and 10 of which was muscle. However, the resistance-training group lost 32 pounds, and 32 pounds were fat; zero was muscle.

In other words, the resistance training group lost significantly more fat and didn't lose any muscle. Not to mention, when resting metabolic rate was calculated after the study, it was found that the aerobic (cardio) group was burning 210 fewer calories daily. In contrast, the resistance-training group had increased their metabolism by 63 calories per day.

## Enter Strength Training for Fat Loss

The point is, you should focus on strength training and watch your diet (instead of doing lots of extra cardio).

Now, one of the ways you can make your strength training workouts help you burn more calories, not only during the workout, but also for up to two days after the workout,<sup>4</sup> is to incorporate a metabolic complex, like two provided here, at the end of your strength-training workouts as a "finisher."

## Metabolic Strength-Training Complexes

A metabolic complex is a series of strength-training exercises that are each performed for multiple reps using the same piece of equipment. In other words, a complex is a full-body circuit where all of the stations involve one piece of equipment, which is helpful in a crowded gym with lots of people all trying to use the same equipment. Here are two sample metabolic strength-training complexes.

### BARBELL COMPLEX:

Reverse Lunge  
Overhead Push Press  
Wide-Grip Bent-over Row  
Wide-Grip Romanian Deadlift

#### 1. REVERSE LUNGE

Stand tall with your feet hip-width apart and a barbell across your shoulders behind your head. Step backward with one foot and drop your body so your knee lightly touches the floor. Reverse the movement by coming out of the lunge and bringing the same foot forward so that you are back to your starting position. Perform the same movement on the opposite leg.

*Note:* After performing the last repetition of the reverse lunge, use your legs and arms in a coordinated fashion to lift the barbell off the back of your shoulders to the front of your body to begin the overhead push press.

#### 2. OVERHEAD PUSH PRESS

Stand with your feet shoulder-width apart and hold the barbell with your hands just outside shoulder-width apart. Slightly bend your knees and then quickly reverse the motion, exploding into the bar and driving the barbell overhead using both your arms and legs in a coordinated fashion. Once the bar is completely overhead, slowly lower the barbell back down to complete one full repetition.

#### 3. WIDE-GRIP BENT-OVER ROW

Stand with your feet shoulder-width apart and hold a barbell with your hands roughly 12 inches outside each hip. Bend over at your hips, keeping your back straight so that your torso is parallel to the floor and keeping your knees bent 15 to 20 degrees. Row the bar into the middle of your torso between your chest and your belly button. Slowly lower the bar without allowing it to contact the floor until the set is completed.

## 4. WIDE-GRIP ROMANIAN DEADLIFT

Stand with your feet shoulder-width apart and hold a barbell in front of your thighs with your arms straight and your hands placed on the bar roughly 12 inches outside each hip. Keeping your back straight, hinge at your hips and bend forward toward the floor, keeping your knees bent at roughly a 15- to 20-degree angle. As you hinge forward, drive your hips backward and do not allow your back to round out.

### DUMBBELL COMPLEX:

**Uppercut**  
**Squat to Romanian Deadlift**  
**Freestanding One-arm Row**

#### 1. UPPERCUT

Stand tall with your feet roughly shoulder-width apart while holding a dumbbell in front of each shoulder. Press one dumbbell into the air as you rotate to the opposite side. Reverse the motion and press while rotating to the other side. To better allow your hips to rotate in this exercise, allow your heel to come off the ground as you turn.

#### 2. SQUAT TO ROMANIAN DEADLIFT

Stand tall with your feet hip-width apart and your toes pointed straight ahead. Hold a dumbbell in each hand at your sides by your hips. Perform a squat by bending your knees and sitting back at your hips. Go as low as you can possibly go without allowing your lower back to round out. As you squat, be sure that you do not allow your heels to come off the ground or your knees to come together toward the midline. Stand tall again and bring the dumbbells in front of your thighs. Keep your back straight, hinge at your hips and bend forward toward the floor, keeping your knees bent at roughly a 15- to 20-degree angle. As you hinge forward, drive your hips backward and do not allow your back to round out. Once your torso is roughly parallel to the floor, drive your hips forward toward the dumbbells, reversing the motion to stand tall again.

*Note:* After you finish all of your squat to Romanian deadlifts, place one dumbbell on the floor to set up to perform the next exercise, freestanding one-arm row.

#### 3. FREESTANDING ONE-ARM ROW

Assume a split-stance position, with your right leg in front of your left leg with both knees slightly bent, and hold a dumbbell with your left hand. Hinge at your hips, keeping your back straight so that your torso becomes parallel with the floor. Perform a row, pulling the dumbbell toward your body without rotating the shoulders or hips, making sure to pull your scapula toward your spine in a controlled manner as your arm moves into your body. Be sure to maintain a stable spinal position, keeping your back straight throughout the exercise. Slowly lower the dumbbell toward the floor without letting it touch the floor. Repeat on the other side.

## Using Metabolic Strength-Training Complexes

Now that you've learned how to perform two metabolic complexes, you need to know the parameters for using them:

- Use the heaviest load possible to complete the reps while moving quickly with good control through the complex.
- Perform 6 to 15 reps per exercise within a given complex and 3 to 5 sets per complex.
- It is recommended that you use a higher number of repetitions for the easier exercises (the ones you're strongest at performing) within a complex and use a lower number of repetitions for the most difficult exercises (the ones you're weakest at performing).
- There is no rest between exercises within a given complex (unless you need to take a quick breath). However, you should rest from 90 seconds to three minutes between complexes (i.e., after completing a full round of a complex).

*For photos of these exercises, visit [fitnessrxwomen.com/strengthtrainingfatloss](http://fitnessrxwomen.com/strengthtrainingfatloss).*

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### REFERENCES

1. Willis et al. Effects of aerobic and/or resistance training on body mass and fat mass in overweight or obese adults. *J App Phys.*, vol. 113 no. 12: 1831-1837; 2012
2. Frank M. Sacks, M.D., George A. Bray, M.D., et al. Comparison of Weight-Loss Diets with Different Compositions of Fat, Protein, and Carbohydrates. *N Engl J Med* 2009; 360:859-873 February 26, 2009
3. Bryner RW, et al. Effects of resistance vs. aerobic training combined with an 800 calorie liquid diet on lean body mass and resting metabolic rate. *J Am Coll Nutr.* 1999 Apr;18(2):115-21.
4. Chantal A. Vella, PhD, Len Kravitz, PhD. Exercise After-Burn: A Research Update. *IDEA Fitness Journal*. November 2004.

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## GET ON THE BIKE!

The Physical and Mental Benefits of Spinning

There are people who love spin, and there are people who despise spin; there is nobody in between. There are rumors and misconceptions about spinning, also known as indoor cycling, like, "It'll make my legs big," or "It's only for the outdoor rider."

Now listen up— I'm a spin instructor, certified by Mad Dogg Athletics, Inc., and I'm here to tell you something: I haven't ridden outdoors since I was a small child, and my legs are far from "big." I'm here as, yes, an advocate for spinning, but also to give you some solid information as to why you should try it at least three times before you dismiss it as an effective workout, and five reasons why you need it in your life.

### Third Time's the Charm

If you've ever walked into a spin class in a gym or even a studio, you might have been a bit intimidated by the experience. Usually everyone looks like they've been riding in the Tour de France since they were 6, or the instructor is wearing an intense get-up like a sweatband and leg warmers. I'll be the first to admit that some spin classes are like that. That's why so many people try it one time and walk (wobble) away, never getting back on the saddle again.

#### **But it's important to try spinning at least three times for a few reasons:**

The first time, it's to get your feet wet. You have to figure out what the class is all about; you have to learn what second, third and the saddle position entail. You have to figure out if you connect with the instructor, and you have to learn to be (a little) coordinated. The first time is the hardest.

The second time, you're learning the ropes and you can finally start to feel like your body is swaying to the rhythm of the bike; if not, at least you're not falling off. This time you're definitely feeling more capable physically, and not quite as sore.

The third time, something wonderful happens. Not only are

you connected to the physical aspect of the bike, but to something deep inside of your mind. This is what we call "cycling transcendence." Sounds corny, but there's a reason why SoulCycle is so popular in New York City. There's a moment during that (usually) one-hour spin class where a participant feels like he or she just wants to burst out in a joyous song. That third time is where the mind-body connection happens. Never let the fear of looking stupid keep you from going into a spin class. We were all once beginners.

### The Benefits

Now that you've conquered your first three spin classes, you're probably wondering, "What is this cycling thing going to do for me physically?" After teaching hundreds of clients in three different gyms and one studio, I can tell you for certain five things:

**1. You'll burn a heck-ton of calories.** According to the American Council of Exercise, spinning burns 450 calories in 45 minutes. Typically, in my classes you'll burn more (up to 700) because it's an hour. It also depends on the amount of resistance you put on the flywheel, which makes it harder to pedal.

**2. You'll become more conditioned.** When I first began spinning, I couldn't even make it through an entire class without huffing and puffing, and now I can talk (sometimes yell) at my clients while pedaling at 90 to 100 RPMs (revolutions per minute.) Consistent interval training, according to *Runner's World*, increases your VO2 max, which allows you to utilize oxygen more efficiently, and in turn, your body will become healthier and your heart will become stronger.

**3. You'll burn fat.** Spin is made up of high-intensity intervals. It's another common misconception that the classes are one hour of consistent torture, because a good instructor should push you hard for small amounts of time

## 30-Minute Interval Workout

Fitness is about taking chances and stepping out of your comfort zone. When choosing a place to spin, make sure it's somewhere you feel like you could see yourself consistently going to, and a place you feel is safe and clean. Indoor cycling is about so much more than a workout; it's about pushing yourself physically and mentally. While it is a challenge, once it's over the feeling of accomplishment will outshine any doubts you ever had in your ability to defeat the ride.

(think 30 seconds) and then back away to allow your heart rate to recover. A recent study in the *Journal of the American College of Cardiology* stated that short bursts of running is just as beneficial as logging long miles, and the same can be said for any kind of aerobic exercising. High-intensity interval training (also known as HIIT) burns fat by pushing your body to its maximum potential, and then allowing for recovery.

**4. You'll look good.** Spinning will tone and shape your legs, butt and core. Another common misconception is that biking will make your legs "big" or "manly." With the amount of calories that you burn taking a spin class, if you are looking to burn fat while also adding lean muscle, proper nutrition is key.

**5. You'll feel good.** If you continuously attend spin classes, you will become addicted to the "high" you feel both physically and mentally after you get off the stationary bike. A recent study reported by ScienceDaily suggested that biking can also improve mental health, and those who continuously participate in aerobic exercise suffer from depression less. ■

### REFERENCES

Eyestone, Ed. "How To Improve Your Vo2 Max." Runner's World & Running Times. N.p., 09 Jan. 2008. Web. 02 Jan. 2015.

University of East Anglia. "Walking or cycling to work improves wellbeing, researchers find." ScienceDaily. ScienceDaily, 14 September 2014. www.sciencedaily.com/releases/2014/09/140914211056.htm.

Ohta M, Mizoue T, Mishima N, Ikeda M. Effect of the physical activities in leisure time and commuting to work on mental health. *J Occup Health*. 2007 Jan;49(1):46-52.

"Professional Certification." ACE Fitness. http://www.acefitness.org/. Web. 02 Jan. 2015.

Here's a sample 30-minute interval workout that you can do at home if you have a stationary bike, or even in the spin room at the gym:

- **Five-minute warm-up:** nice and light with three to five turns to the right on the flywheel.

- **Three minutes:** Second position, light jog out of the saddle, core tight and back erect; pushing and pulling with the obliques and keeping the foot flat while pedaling.

- **Three minutes** (add one turn to the right): Speed intervals in the saddle— 30-second all-out sprints, and rest for 90 seconds. Repeat.

- **Five minutes** (add two-three turns to the right): Seated climb in the saddle. Here, your legs should be moving slowly because the resistance is high. Your power should be high as well, which increases strength in your legs.

- **Four minutes** (add a half-turn

one turn to the right): Standing climb out the saddle. Standing climbs are easier than seated because you can use momentum from your legs to power up, but your heart rate should still be elevated at this point.

- **Five minutes** (two turns to the left): Finish with speed intervals in the saddle— 30-second all-out sprints, and rest for 90 seconds. Repeat for the remaining time. This should burn!

- **Five minutes** to cool down: Finish the ride with three to five turns on (same as warm-up.)

You can try different variations of these to get different results in your workout! If you want to build up strength, add more resistance (turns to the right) on the flywheel; if you want more toning and cardiovascular endurance, use less resistance and more speed!

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# The Core 4 Workout on the SUSPENSION TRAINER

IT'S NO SECRET THAT BUILDING A STRONGER CORE CAN HELP YOU GET LEAN (WHEN DONE IN CONJUNCTION WITH CLEAN EATING HABITS, OF COURSE), WHILE ALSO INCREASING YOUR FUNCTIONAL ABILITY, SINCE YOUR "CORE" IS WHAT BRIDGES THE GAP BETWEEN YOUR ARMS AND LEGS. HOWEVER, WHAT MANY EXERCISERS AREN'T AS AWARE OF IS THAT AN INTEGRATED CORE TRAINING APPROACH HAS BEEN SHOWN IN THE EXERCISE RESEARCH TO BE A MORE EFFECTIVE METHOD OF STRENGTHENING YOUR CORE MUSCLES.

A 2013 study published in the *Journal of Strength & Conditioning Research* sought to determine whether integration (i.e., compound) core exercises that require activation of the distal (away from the center of the body) trunk muscles (deltoid and gluteal) elicit greater activation of primary trunk muscles in comparison with isolation core exercises that only require activation of the proximal trunk muscles.

The results of this study indicate that the activation of the abdominal and lumbar muscles was the greatest during the exercises that required deltoid and gluteal recruitment. Therefore, the researchers of this study concluded that an integrated routine that incorporates the activation of distal trunk musculature would be optimal in terms of maximizing strength, improving endurance, enhancing stability and reducing injury.

In this article, you'll discover a compound core training workout using a suspension trainer— you know, those cool-looking straps with handles (or rings) hanging at your gym— to train your body from the center out!

## Core Training vs. Abs Training

To help you better understand the exercise recommendations in this article, it's important to understand that your core encompasses your entire torso, which includes your abdominals and obliques, along with all the other muscles that surround your spine, which includes your chest, glutes, mid-back and low-back muscles. So, when you train your abs, you're just working one component of your core.

The four suspension training exercises included in this workout train your entire torso by involving many muscles. Since we're not isolating here, the plan is to train the core from multiple angles to ensure you get full-spectrum core strength!

## Four Components of a Core Workout = Four Exercises!

To ensure this suspension training, integrated core training program is fully comprehensive and hits your torso from all angles, this workout includes an exercise for each of the following four components of your core:

1. Anterior (front) Core (with shoulder movement)
2. Anterior (front) Core (with hip movement)
3. Lateral Core
4. Rotational Core



## THE CORE 4 SUSPENSION TRAINER WORKOUT

Perform the following four exercises circuit style, resting no more than 30 seconds between exercises:

**ANTERIOR (FRONT) CORE** (with shoulder movement):  
Fall-outs x 10-15 reps

**ROTATIONAL CORE:** Oblique Twists (Torso Rotation) x 6-10 reps each side

**ANTERIOR (FRONT) CORE** (with hip movement):  
ABC Knee Tucks x 9-15 reps

**LATERAL CORE:** Side Plank with Hip Lift (Lateral Core) x 8-12 reps each side

Once you've completed all four exercises (i.e., completed one round of the circuit), rest two to three minutes. Perform two to three rounds of this circuit.

Each of these four actions emphasizes a different aspect of your core. And, keep in mind the research findings we discussed— since this is an integrated abdominal training program, each of the exercises used to represent each of these four categories also involves some contribution from your shoulders and/or hips.

## Exercise Descriptions

Here's how to properly perform each of the exercises in the core four suspension trainer workout.

### SUSPENSION FALL-OUT

**Set-up:** Facing away from the anchor point, grab onto the handles and lean your weight forward in a push-up like position.

**Action:** Without bending your elbows, reach your arms out above your head as if you were diving into a pool. Pull your arms back in to complete one rep.

### Coaching Tips:

- Do not allow your hips to sag toward the floor.
- Keep your abs tight and spine straight throughout.
- To increase the difficulty, start the exercise from a more drastic forward lean angle, which brings your body closer to the floor.

# DAIRY FREE PROTEIN PERFECTION



## SUSPENSION OBLIQUE TWISTS

**Set-up:** With your palms facing down toward one another and your body turned 90 degrees to the anchor point of the suspension device, hold onto the handles and lean back with your legs in a split stance with your rear leg behind. Keep your body in a straight line from head to toe. Turn your torso to face the anchor point with your elbows straight and extended out in front of your shoulders.

**Action:** Pull yourself up toward the anchor point by bending your elbows. Keep your lead arm underneath your far arm. Then, rotate your torso and press your arms out the sides directly in front of your chest. Return back to the start and perform all the given reps on the same side before switching sides.

### Coaching Tips:

- Always keep your weight leaning away from the anchor point.
- Rotate your shoulders and hips at the same time and at the same speed.
- To increase the difficulty, start the exercise from a more severe backward lean angle, which brings your body closer to the floor.

## SUSPENSION ABC KNEE TUCK

**Set-up:** Assume a push-up position with your hands on the floor and your ankles inside of the straps at roughly the same height as your shoulders. Your feet should be directly underneath of the anchor point.

**Action:** By bending your knees and flexing your hips, pull your legs straight into your chest. Then straighten them back out. Now bring them back in again, but this time at an angle across your body. Straighten your legs back out again. Then bring them back in across your body on the opposite side. That's one round of "ABC," which is 3 reps.

### Coaching Tips:

- Do not allow your lower back to sag toward the floor when your legs are straight.
- Bring your legs in and out in a smooth and controlled fashion.
- Your hips should raise up toward the sky each time you "tuck" your legs into your body.

## SUSPENSION SIDE PLANK WITH HIP LIFT

**Set-up:** Lie on your side with your ankles in the straps (one foot stacked on top the other) and your left elbow underneath your shoulder, propping up your torso.

**Action:** Lift your hips towards the sky, pausing for one to two seconds at the top. Then lower yourself back down. That's one rep!

### Coaching Tips:

- Do not allow your body to rotate at any point in the exercise.
- Your feet should be roughly 6 inches off the ground in the straps.

For photos of these exercises and non-suspension based alternatives, visit [fitnessrxwomen.com/core4suspensiontraining](http://fitnessrxwomen.com/core4suspensiontraining).

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### Reference:

Integration core exercises elicit greater muscle activation than isolation exercises. Gottschall JS, Mills J, Hastings B. J Strength Cond Res. 2013 Mar;27(3):590-6.

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# THE ANTI-INFLAMMATORY DIET

## LOSE BELLY FAT AND STAY HEALTHY FOR LIFE



**Chronic low-grade inflammation, the kind that simmers inside your body without any obvious warning signs, is slowly damaging your tissues** and may be contributing to the development of several chronic diseases including heart disease, type 2 diabetes, cancer and neurodegenerative disorders including Parkinson's, Alzheimer's and Huntington's disease. Inflammation is also the underlying cause of autoimmune diseases.

Soon after you bruise or cut yourself, your immune system runs to the rescue by increasing blood flow, and delivering fluids, proteins and white blood cells to the injured area, resulting in swelling and redness. This acute inflammatory response is an essential part of the healing process that helps protect the site from infection and further injury. Chronic low-grade inflammation, on the other hand, is like a fire that is constantly burning inside your body, overloading your immune system, putting it in constant fight mode. Because this type of inflammation is harmful rather than helpful, taming it by losing excess body fat, eating an anti-inflammatory diet and doing the right type of physical activity will improve your health and could decrease your risk of developing several diseases.

### EXCESS BODY FAT AND THE WAR WITHIN

If you look in the mirror and worry about excess body fat because you can't fit into your skinny jeans or don't feel comfortable wearing that form-fitting dress, that should be the least of your concerns. Fat is an active tissue, constantly pumping out substances that influence your appetite, metabolic rate, immune system and blood glucose levels. Several of these substances also increase inflammation.

People with excess fat, particularly visceral fat, the kind that hugs your organs like bubble wrap and is considered very harmful for heart health, have even more pro-inflammatory compounds being pumped out of their fat tissue, creating a vicious domino effect where the excess fat leads to elevated levels of inflammatory substances that create additional damage. Losing excess fat, particularly belly fat, will lower inflammation and improve health and decrease risk for disease, particularly heart disease, the number one cause of death in both men and women in the U.S.

### DIET 911 FOR FIGHTING INFLAMMATION

In general, diets high in sugar, saturated fat, fried foods

and foods cooked on high, dry heat contribute to inflammation. When you grill, broil, roast or fry meat, poultry, pork or fish, a number of nasty compounds are formed. As a result, your plate is full of pro-inflammatory heterocyclic amines (HCAs), polycyclic aromatic hydrocarbons (PAHs) and advanced glycation end products (AGEs) that may be damaging the cells inside your body. According to the National Cancer Institute (NCI), HCAs and PAHs must be metabolized by specific enzymes (a process called bioactivation) before they can damage DNA. Yet the activity of these enzymes varies between people and therefore, one's risk of developing cancer due to HCA and PAH exposure depends on how they metabolize these compounds. AGEs accumulate in the human body, affect cell functioning and may contribute to insulin resistance, type 2 diabetes and, as the name implies, aging. Think of them as compounds that literally age your body.

To decrease your exposure to these compounds, turn down the heat, opt for moist heat cooking methods including poaching, steaming, stewing or boiling, cook your food for a shorter period of time, avoid smoked meats and marinade your meat, poultry, pork and fish in acidic ingredients such as lemon juice or vinegar. Also, add herbs and spices to your foods whenever possible to help decrease the formation of HCAs and malondialdehyde (MDA) – a compound produced in greater quantities in meat cooked on low versus high heat and one that is also produced in your body when you digest fat. MDA increases inflammation and oxidative damage to tissues including cartilage and LDL cholesterol. Oxidized LDL contributes to atherosclerosis, the formation of plaque in arteries (gunk that clogs them) impairing blood flow to organs. Atherosclerosis can affect arteries throughout the body, including the heart, brain, arms, legs, pelvis and kidneys, and therefore cause chronic kidney disease, peripheral arterial disease, carotid artery disease and coronary heart disease.

### SPICE THINGS UP

Herbs and spices preserve and lend flavor to food without the addition of fat, sugar or salt. Composed of a complex mix of antioxidants, healthy plant-based compounds called phytochemicals (plant chemicals), vitamins and minerals, herbs and spices also protect your body from harm and may help kill germs.

Herbs and spices seem to fight inflammation throughout

## *Chronic low-grade inflammation, like a fire that is constantly burning inside your body, overloading your immune system.*

the body. For instance, when consumed in doses ranging from 30–500 milligrams over a three- to six-week period, ginger reduced osteoarthritis pain in adults. Osteoarthritis is an inflammatory condition often characterized by pain and stiffness in joints due to the breakdown of cartilage that cushions joints. Also, research shows that 2 grams of either raw or heat treated ginger taken before a tough bout of exercise decreased pain and inflammation 24 hours after the exercise in college-aged students. Plus, a study in men found that a mixture of spices including cloves, cinnamon, oregano, ginger, black pepper, paprika and garlic, decreased formation of MDA (as measured by blood and urinary MDA in the study subjects).

Though widely recommended for its anti-inflammatory activity, curcumin, a group of compounds found in the spice turmeric, is poorly absorbed. And therefore, a sprinkle of turmeric won't do much. When taken in much larger doses (3.6 grams), curcumin is detectable in the body. Luckily it is considered safe when taken in supplemental doses of up to 8 grams per day.

### VITAMIN D

Vitamin D, found in fatty fish, fortified milk, some brands of yogurt and other fortified foods, may help decrease inflammation. Yet the connection between vitamin D and inflammation seems to be a cyclical pattern. Low levels of vitamin D may increase inflammation while inflammation may also lead to lower levels of vitamin D.

In an attempt to figure out how vitamin D may affect the inflammatory cascade, infection-fighting white blood cells were exposed to a molecule found in the walls of bacterial cells that promotes an intense inflammatory response. Cells incubated in a solution with no vitamin D produced higher levels of inflammatory compounds than those exposed to vitamin D, suggesting vitamin D plays an important role in the immune and inflammatory response.

Newer research also suggests that low levels of vitamin D may not be the cause of but instead a consequence of inflammation. Given the complex relationship between vitamin D and inflammation, it makes sense to consume vitamin D rich foods, get tested by your physician if you think you may be low (or if you have an inflammatory condition) and follow up with regular treatment.

### DIETARY PATTERNS MATTER

While scientists are busy trying to tease out single nutrients or compounds in foods that are linked to lower or higher levels of inflammation, dietary patterns that promote good health may explain the synergistic effect of a combination of healthy foods.

The Mediterranean diet is a perfect example of a dietary pattern that is rich in vitamins, minerals and healthy plant-based compounds due to its emphasis on plant-based foods, such as vegetables, fruits, whole grains, legumes and nuts, spices and herbs for flavor. Compounds consumed in high quantities when following this diet reduce circulating levels of inflammatory compounds. In addition, the Mediterranean diet is associated with increased telomere length—longer telomeres are associated with decreased aging. Plus, populations that follow the Mediterranean diet have a reduced risk of death from heart disease and cancer and a

lower incidence of some neurodegenerative diseases. Yet this pattern of eating isn't the only one associated with improvements in inflammation and disease risk.

The Nordic Diet is largely composed of whole grains, berries, fruits, vegetables, rapeseed oil, three servings of fish per week and low-fat dairy products. In one randomized trial, overweight and obese middle-aged adults with at least two risk factors for heart disease or diabetes followed the Nordic Diet or their regular diet for 18 to 24 weeks. After the study period, researchers found neither group lost weight yet the Nordic Diet significantly altered the expression of inflammatory genes in subcutaneous fat—the kind that lies right underneath the skin, which suggest the benefits of this diet aren't the result of losing fat (which has its own direct effect on decreasing inflammation).

### GET MOVING AND RAMP UP THE INTENSITY

Exercise, regardless of whether it helps a person lose weight or not, will lower chronic inflammation. In fact, those who make exercise a lifestyle habit will reduce inflammation. And though muscle-building resistance training does not appear to influence chronic inflammation, aerobic exercise, particularly higher intensity aerobic exercise (75–80% of maximal heart rate), improves inflammatory status.

If you are looking at foods based solely on their fat, carbohydrate and protein content, it's time to dig deeper and consider not only your food choices, but how you marinade or season and cook them and what you pair them with. A good rule of thumb for lowering inflammation, belly fat and disease risk: flavor your meals with herbs and spices, ramp up your intake of vitamin D rich foods, consume colorful plant-based compounds at every meal and get moving and stay moving. ■

### REFERENCES

- Kromhout D, Geleijnse JM, Menotti A, Jacobs DR Jr. The confusion about dietary fatty acids recommends R. Berg K. Role of exercise on inflammation and chronic disease. *Strength Cond J* 2014;36(4):87–9
- Kolehmainen M, Ilvens SM, Paananen J, et al. Healthy Nordic diet downregulates the expression of genes involved in inflammation in subcutaneous adipose tissue in individuals with features of the metabolic syndrome. *Am J Clin Nutr* 2015;101(1):228–39.
- Poulsen SK, Due A, Jordy AB, Kiens E, et al. Health effect of the New Nordic Diet in adults with increased waist circumference: a 6-mo randomized controlled trial. *Am J Clin Nutr* 2014;99(1):35–45.
- Katcher HI, Legro RS, Kuselman AR, et al. The effects of a whole grain-enriched hypocaloric diet on cardiovascular disease risk factors in men and women with metabolic syndrome. *Am J Clin Nutr* 2008;87:79–90.
- Chemicals in Meat Cooked at High Temperatures and Cancer Risk. National Cancer Institute. <http://www.cancer.gov/cancertopics/factsheet/Risk/cooked-meats#r1>
- Safer Grilling Methods Might Cut Cancer Risk. Medline Plus. [http://www.nlm.nih.gov/medline-plus/270/news/fullstory\\_126369.html](http://www.nlm.nih.gov/medline-plus/270/news/fullstory_126369.html)
- Santarelli RL, Pierre F, Corpet DE. Processed meat and colorectal cancer: a review of epidemiologic and experimental evidence. *Nutr Cancer* 2008;60(2):131–144.
- Herber D. Oxidative stress markers and inflammation: the role of spices and herbs. McCormick Science Institute science summit – spices and herbs. AGEs accumulate in the human body, affect cell functioning and may contribute to insulin resistance, type 2 diabetes and, as the name implies, aging.
- Alshaarawy O, Zhu M, Ducatman A, et al. Polycyclic aromatic hydrocarbon biomarkers and serum markers of inflammation: A positive association that is more evident in men. *Env Res* 2013;98-104.
- Asthma. MedlinePlus. NIH Publication 08-4051
- Prasad C, Imran V, Marotta F, et al. Lifestyle and Advanced Glycation End Products (AGEs) Burden: Its Relevance to Healthy Aging. *Aging Dis* 2014;5(3): 212–217.
- Brown ED, Morris VC, Rhodes DG, Sinha R, Levander OA. Urinary malondialdehyde-equivalents during ingestion of meat cooked at high or low temperatures. *Lipids* 1995;30(11):1053–6.
- Tanagi KL, Bujo H, Inoue M, Mikami K, Kotani K, Takahashi K, Kanno T, Saito Y. Increased circulating malondialdehyde-modified LDL particles in patients with coronary artery diseases and their association with peak sizes of LDL particles. *Arterioscler Thromb Vasc Biol* 2002;22(4):662–6.
- What is Atherosclerosis? National Heart, Lung, and Blood Institute. <http://www.nhlbi.nih.gov/health/health-topics/topics/atherosclerosis>
- Li Z, Henning SM, Zhang Y, et al. Antioxidant-rich spice added to hamburger meat during cooking results in reduced meat, plasma, and urine malondialdehyde concentrations. *Am J Clin Nutr* 2010;91(5):1180–1181.
- Mangin M, Sinha R, Fincher K. Inflammation and vitamin D: the infection connection. *Inflamm Res* 2014;63(10):803–19.



# The CARNITINE DILEMMA

**The role of nutritional supplements in sports performance and health is in constant flux, and the story of L-carnitine is a prime example.** L-carnitine was discovered as an extract from meat by a Latvian biochemist in the early 1900s.<sup>1</sup> The biochemical role of L-carnitine in long-chain fatty acid oxidation was described in the late 1950s.<sup>1</sup> Supplementation to improve fat burning soon followed. However, only in recent times have we truly begun to realize its role in our health and metabolism.

L-carnitine helps shuttle long-chain fatty acids into cellular mitochondria such that they can be burned to produce ATP. It basically acts as a "furnace tender," shoveling the coal in and taking the soot out. It is important to realize that the soot removal is also critical to proper functioning of the mitochondrial "furnace." The "soot" is acetyl-coenzyme A (CoA). When acetyl-CoA builds up, it shuts down the metabolism of glucose. L-carnitine removes the acetyl group from acetyl-CoA. By renewing coenzyme A availability, carnitine helps glucose metabolism drive forward during intense exercise.

## Improved Recovery From Exercise

L-carnitine has been proven to improve recovery from exercise.<sup>2</sup> It is thought that since L-carnitine controls entry of fats into the mitochondria, that supplementation could help burn fat more efficiently. Unfortunately, this hasn't been unanimously supported by the scientific literature.

L-carnitine's ability to improve glucose control and heart function has been investigated extensively. By acting in its role of "soot" removal, L-carnitine supplementation has demonstrated improvements in glucose metabolism and insulin sensitivity.<sup>3</sup> This could potentially reduce the risk of complications from diabetes and the metabolic syndrome.

Furthermore, since heart muscle utilizes fats for energy, L-carnitine supplementation has been studied to protect the heart from acute heart attacks and its late complications. The results from these studies are both beneficial and detrimental, as the picture is more complex than just adding the benefits of L-carnitine to the system. Our bodies have the ability to metabolize and convert the ingredients of foods and supplements into other biologically active compounds. Buildup of compounds like long-chain fatty acid acylcarnitines can result in metabolic dysfunction, insulin resistance and pro-inflammatory effects.<sup>1</sup>

## Our Complex Metabolism

As you can tell from the multitude of supplements on the market, our physiology and metabolism are extremely complex. The interplay between the foods we eat, the hormones we produce and the enzymes in our mitochondria that burn fat is further complicated by the symbiotic relationship that we have with bacteria in our bodies. Our gastrointestinal (GI) tracts are teaming with so many species of bacteria that have unique metabolic processes, that bacteriologists are ostensibly overwhelmed. When some bacteria are exposed to the foods we eat, they also "eat" some of those foods. When bacteria eat, they "poop" too. In other words, they produce metabolites that end up back in our GI tracts. Those metabolites can then be absorbed and enter our circulation.

Our understanding of all of these bacterial metabolites and their effects on our health is infantile. We know that some short-chain fatty acids produced by bacteria from soluble fiber can be beneficial to our bodies. On the other hand, metabolites like trimethylamines (TMAs) may be detrimental when processed by our livers to artery-hardening trimethylamine oxides (TMAO). This is where the L-carnitine dilemma comes into play.

## Red Meat and Gut Bacteria

As scientists have largely disproven the role of saturated fats and cholesterol in the formation of heart disease, they have looked to see if other components of meat contribute to atherosclerosis (hardening of the arteries). Everything from salt content, heterocyclic amines from cooking meat, carnitine and phosphatidylcholine have been studied to find a

# Our knowledge of how supplements affect our health and metabolism is constantly in flux and getting increasingly more complex. This only reinforces your need to keep reading FitnessRx for Women.

link between these meat-specific compounds and heart disease.

Recent studies suggest a complex link between eating meat, its L-carnitine and choline content, carnivore-specific gut bacteria and atherosclerotic heart disease. The research demonstrates that gut bacteria specifically found in those who eat meat can convert L-carnitine and choline into TMA.<sup>4,5</sup> Your body absorbs the TMA and converts it to TMAO in your liver. TMAO then enters circulation and impairs your body's ability to remove cholesterol from your artery walls. This leads to inflammatory plaques that cause arterial wall damage and eventual narrowing of the arteries. Furthermore, TMAO appears to worsen insulin sensitivity.

## Improving Carnitine Function

With so many bacterial species in our guts, it is hard to imagine that we should be killing them all with antibiotics to rid ourselves of the TMA-producing species. Another option would be to support the healthy species like *Lactobacillus paracasei* with probiotic supplements.<sup>6</sup> Further, we should focus on improving bacterial health with "prebiotics." Prebiotics are foods rich in soluble fibers and glutamine that fuel healthy bacterial growth in the colon. High-fiber diets keep you regular AND prevent heart disease.

*Is it possible to improve carnitine function without having to consume L-carnitine and expose it to GI production of TMAO?* Indeed, recent research suggests that we can through supplementation with betaine.<sup>7</sup> Betaine acts as a methyl-group donor and can improve body composition. In human studies, low betaine levels have been correlated with the metabolic syndrome and lipid disorders. Through a series of enzymatic steps, betaine can donate its methyl group to produce trimethyl-lysine, a precursor to production of L-carnitine. Supplementation with betaine can increase muscle L-carnitine levels by 1.4-fold.<sup>7</sup>

As far as we know, betaine isn't converted by our bacteria into any bad metabolites. The moral of this story is that our knowledge of how supplements affect our health and metabolism is constantly in flux and getting increasingly more complex. This only reinforces your need to keep reading FitnessRx for Women for further updates on your

## REFERENCES

- Dambrova M, Liepinsh E. Risks and Benefits of Carnitine Supplementation in Diabetes. *Exp Clin Endocrinol Diabetes* 2014;Oct 24. [Epub, ahead of print]
- Huang A, Owen K. Role of supplementary L-carnitine in exercise and exercise recovery. *Med Sport Sci* 2012;59: 135-142.
- Vidal-Casariago A, et al. Metabolic effects of L-carnitine on type 2 diabetes mellitus: systematic review and meta-analysis. *Exp Clin Endocrinol Diabetes* 2013;Apr;121(4):234-8.
- Koeth RA, et al. Intestinal microbiota metabolism of L-carnitine, a nutrient in red meat, promotes atherosclerosis. *Nat Med* 2013; May;19(5):576-85.
- Wang Z, et al. Gut flora metabolism of phosphatidylcholine promotes cardiovascular disease. *Nature* 2011;Apr 7;472(7341):57-63.
- Martin FP, et al. Probiotic modulation of symbiotic gut microbial-host metabolic interactions in a humanized microbiome mouse model. *Mol Syst Biol* 2008;4:157.
- Pekkinen J, et al. Betaine supplementation causes increase in carnitine metabolites in the muscle and liver of mice fed a high-fat diet as studied by nontargeted LC-MS metabolomics approach. *Mol Nutr Food Res* 2013;Nov;57(11):1959-68.

treasured supplements.

[Here's some fun with biochemistry and linguistics. Betaine supplementation improves metabolism by enhancing carnitine function in muscle. Beta-alanine supplementation improves production of carnosine in muscle. Confused yet?]

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## THE ANTAGONISTIC EFFECTS OF CAFFEINE AND TAURINE IN ENERGY DRINKS

Energy drinks have become a billion-dollar industry, challenging the eye-popping popularity of Starbucks and the likes. Obviously, the main component of energy drinks is caffeine with some being more potent than others. However, many manufacturers feel the need to add supplemental ingredients to their drinks to "boost" their energizing effects. Whether this is for marketing or real effect is left to be determined. In fact, L-carnitine is a popular ingredient.

One of the most popular additives to energy drinks is the non-essential amino acid taurine. Taurine is thought to modulate cell volume, muscle contraction and aid in antioxidant defenses from stress in muscle.<sup>1</sup> Unfortunately for the college student during finals week, the scientific literature does not support using taurine to enhance the vitalizing effects of your caffeinated beverage.

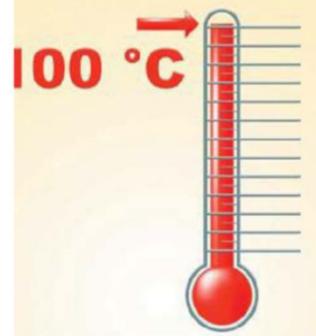
A recent animal study evaluated the muscle ergogenic effects of caffeine alone or in combination with taurine, and found no beneficial effect to adding taurine.<sup>2</sup> Two human, placebo-controlled studies evaluated the effects of using caffeine, taurine or a combination of the two on attention/"energy."<sup>3</sup> One double-blind, placebo-controlled study compared 80 milligrams of caffeine with or without one gram of taurine and found that co-administration of taurine attenuated the facilitative effects of caffeine.<sup>4</sup> Another study compared 200 milligrams of caffeine with or without two grams of taurine, and further showed that taurine inhibited feelings of vigor normally resulting from caffeine alone.<sup>5</sup>

In summary, the makers of Red Bull and Monster energy drinks may not be out for your best interest when trying to boost your vigor. Not only does taurine have little effect on its own, but it may also have a detrimental effect on the function of your precious caffeine! Maybe the makers should read FitnessRx to boost their brain potential!

## REFERENCE

- Spriet LL, Whitfield J. Taurine and skeletal muscle function. *Curr Opin Clin Nutr Metab Care* 2015;Jan;18(1):96-101.
- Tallis J, et al. Does a physiological concentration of taurine increase acute muscle power output, time to fatigue, and recovery in isolated mouse soleus (slow) muscle with or without the presence of caffeine? *Can J Physiol Pharmacol* 2014;Sep;92(9):611-16.
- Sorkin BC, et al. Executive summary of NIH workshop on the Use and Biology of Energy Drinks: Current Knowledge and Critical Gaps. *Nutr Rev* 2014;Oct;72 Suppl 1:1-8.
- Peacock A, Martin FH and Carr A. Energy drink ingredients: Contribution of caffeine and taurine to performance outcomes. *Appetite* 2013;May;64:1-4.
- Giles GE, et al. Differential cognitive effects of energy drink ingredients: caffeine, taurine, and glucose. *Pharmacol Biochem Behav* 2012;Oct;102(4):569-77.

**Not only does taurine have little effect on its own, but it may also have a detrimental effect on the function of your precious caffeine!**



# Turn Up the Heat with HOT YOGA

While research on hot and Bikram yoga is limited, there are countless people who swear by its healthy and weight-loss benefits. Here's the lowdown on this increasingly popular method of yoga.

## WHAT'S THE DIFFERENCE?

While many people think Bikram yoga and hot yoga are interchangeable, there are differences. The main difference is that Bikram yoga must contain certain criteria, while general hot yoga can vary by class and studio.

Bikram yoga is a form of hot yoga. Developed from Hatha-style yoga by Bikram Choudhury, Bikram yoga classes are 90 minutes long and include 26 postures and two breathing exercises that are performed in a 105-degree heated room, with 40 percent humidity. In hot yoga, the temperatures and poses vary—the rooms are typically 80 to 100 degrees Fahrenheit. Bikram yoga instructors and studios must be affiliated with Bikram Choudhury in order to be considered true Bikram yoga.

## POSSIBLE BENEFITS

Practicing Bikram yoga in intense heat is said to offer many healthy perks:

- **Cardiovascular:** As a result of the heat, the body becomes more flexible and the blood vessels expand, helping to add a cardiovascular element to the workout.
- **Detox:** Sweating helps you to detoxify and can even help improve skin tone.
- **Deep Stretching:** This type of yoga is great for athletes, or people who have tight muscles, because the heat loosens the muscles, allowing for a deeper stretch. As a result, Bikram yoga promotes balanced strength and balanced flexibility.
- **Reducing Pain:** The heat can ease many ailments, and scientific research has found that yoga in general can reduce pain.
- **Better Circulation:** This results because the muscles are contracted and stretched at a cellular, biomechanical level.
- **Muscle and Joint Balance:** Joint mobility and range of motion increases.
- **Weight Loss:** It's been said that Bikram yoga may help normalize your appetite and help diminish unhealthy cravings because the digestion, respiration, endocrine, lymphatic and elimination systems begin to work together harmoniously.
- **Emotional Balance:** Practicing Bikram yoga cultivates mental faculties like faith, self-control, concentration, determination and patience. Regular practice is said to harmonize the nervous and endocrine systems, resulting in a balanced emotional well-being.

## RESEARCH

The research on hot yoga and Bikram yoga is limited. But researchers at Colorado State University found that hot yoga may be beneficial for fitness goals.

In the study, yoga-training sessions consisted of 90-minute standardized, supervised postures that were performed in a heated (95 to 101 degrees) and humidified studio. Before and after training, the following was measured on the subjects: isometric deadlift strength, handgrip strength, lower back/hamstring flexibility, resting heart rate and blood pressure, maximum oxygen consumption, and lean and fat mass. It was found that the yoga subjects increased deadlift strength, lower back/hamstring flexibility, shoulder flexibility and decreased body fat, modestly, when compared to a control group. It was found that there were no changes in handgrip strength, cardiovascular measures or maximal aerobic fitness. This may reveal that the short-term yoga practice "produced beneficial changes in musculoskeletal fitness that were specific to training stimulus," according to the study.

But people might be overestimating exactly how difficult hot yoga is on their bodies. Researchers from the American Council of Exercise conducted a study of participant's core temperatures and heart rates before, during and after regular and hot yoga sessions (between 90 and 95 degrees). The researchers found that participants of the hot yoga session perceived the exercise to be more difficult, but in reality their heart rates and core temperatures were very similar to the regular yoga session. The ACE researchers mentioned this could be because people feel that they don't have to work as hard in a hotter environment. In addition, it was determined that hot yoga is not dangerous for the average exerciser.

## PRECAUTIONS AND TIPS

EVEN THOUGH IT'S REGARDED AS A SAFE ACTIVITY WITH BENEFITS, THERE ARE SOME PRECAUTIONS TO TAKE—PARTICULARLY WITH BIKRAM YOGA, AS THE ROOM IS USUALLY HOTTER THAN OTHER HOT YOGA SESSIONS:

- **MAKE SURE YOU ARE HYDRATED.** IF YOU ARE NOT PROPERLY HYDRATED, YOU MAY BE NAUSEOUS OR DIZZY AFTER A BIKRAM YOGA CLASS. IN FACT, YOU SHOULD DRINK LOTS OF WATER FOR SEVERAL DAYS BEFORE BRING WATER FOR CLASS ALSO.
- **BEING NAUSEOUS OR DIZZY AFTER BIKRAM YOGA** COULD ALSO BE A SIGN OF POTASSIUM OR SALT DEPLETION. TRY TAKING SALT AND POTASSIUM TABLETS BEFORE A CLASS.
- **DO NOT EAT ONE TO THREE HOURS BEFORE CLASS.**
- **MAN YOGA INSTRUCTORS** WHO TEACH HOT YOGA MAY NOT BE PROPERLY CERTIFIED. BIKRAM INSTRUCTORS MUST COMPLETE AN INTENSIVE NINE-WEEK TRAINING SESSION THAT REQUIRES MORE THAN 500 HOURS OF STUDY. VISIT [WWW.BIKRAMYOGA.COM](http://WWW.BIKRAMYOGA.COM) TO FIND CERTIFIED INSTRUCTORS.
- **A MINIMUM OF 10 CLASSES A MONTH** IS RECOMMENDED TO REALIZE THE BENEFITS OF BIKRAM YOGA, BUT BE PATIENT. FOR BEGINNERS, IT MAY TAKE THREE CLASSES FOR YOUR BODY TO UNDERSTAND THE PROPER APPROACH TO THE POSTURES, AND 10 CLASSES FOR YOUR BODY TO BEGIN TO UTILIZE THE POSTURES CORRECTLY. ■

## REFERENCES

Tracy BLJ, Hart CE. Bikram yoga training and physical fitness in healthy young adults. J Strength Cond Res. 2013 Mar;27(3):822-30.  
 Nereng, Ashley, John P. Porcari, Clayton Camic, Cordial Gillette, and Carl Foster. "ACE-sponsored Study: Hot Yoga—Go Ahead and Turn Up the Heat." ACE Fitness. Web. 21 Jan. 2015.  
 Tripp, Megan. "Hot Yoga vs Bikram Yoga: What's The Difference?" Boston Magazine. Web. 21 Jan. 2015.  
<http://www.bikramyoga.com/>



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